

***Performance of Grain Sorghum  
Hybrids in Louisiana 2014***



**LAES Research  
Summary No. 204  
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# Performance of Grain Sorghum Hybrids in Louisiana, 2014



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**LOUISIANA STATE UNIVERSITY AGRICULTURAL CENTER**

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## TABLE *The Louisiana State University Agricultural Center and the Louisiana Agricultural Experiment Station provide equal opportunities in programs and employment.* OF CONTENTS

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**GRAIN SORGHUM PERFORMANCE TRIALS**

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# Performance of Grain Sorghum Hybrids in Louisiana, 2014

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Performance of grain sorghum hybrids is annually evaluated by Louisiana Agricultural Experiment Station (LAES) researchers in Official Variety Trials (OVT's). The purpose of these trials is to provide to Louisiana growers, seedsmen, county agents of the Louisiana Cooperative Extension Service (LCES), and other interested individuals and organizations with unbiased performance data for commercial grain sorghum hybrids submitted for evaluation by private agencies.

The cooperating LAES units in 2014 were: Rice Research Station, Crowley; Central Research Station, Baton Rouge; Dean Lee Research Station, Alexandria; Red River Research Station, Bossier City; Northeast Research Station, St. Joseph; and Macon Ridge Research Station, Winnsboro.

The LCES also conducted Core Block Trials in 2014 evaluating hybrids on farms around the state. The results from these trials and the OVT's provides information to the grower to help in hybrid selection for their farm.

## PROCEDURES

In 2014, 29 grain sorghum hybrids were entered in the LAES yield trials. Soil type, cultural practices, location summaries, and weather graphs are listed prior to data tables for each location. In weather graphs, maximum and minimum temperatures are weekly averages and rainfall weekly totals. None of the trials were irrigated.

The experimental design at each location was a randomized complete block design with four or five replications. Traits measured and rating scales are listed in Table 1. Traits not listed in Table 1 are footnoted at the base of the respective table. Analysis of variance and least significant differences (LSD) were computed using SAS (Statistical Analysis System). We used the protected F-test, which means LSD's were calculated only if differences among hybrids existed at the 90% confidence level. If differences were significant, an LSD at the 10% probability level was calculated. If the LSD (0.10) for yield in a trial is 400 lb/acre, there is a 10% chance that two hybrids with a reported yield difference of 400 lb/acre are genetically equal and a 90% probability they have differences in genetic potential in that particular environment. LSD values are influenced by how well soil fertility, stand establishment, plot length, harvest efficiency, and other variables are controlled and by number of replications for each hybrid. The letters NS are used in the text and tables to indicate lack of significance (not significantly different) at the 10% probability level. The coefficient of variation (CV) reflects the magnitude of

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experimental error (random variation not accounted for by hybrids and replications) in relation to the trial mean. A high CV means that relative differences among hybrids were not consistent among replications, which reduces the precision of the test.

**Table 1. Traits and rating scales for LAES grain sorghum official variety trials.**

| <b>Trait</b>         | <b>Abbreviation</b> | <b>Description</b>                                                                                      |
|----------------------|---------------------|---------------------------------------------------------------------------------------------------------|
| Yield                | Yield               | Grain yield @ 14.0% harvest grain moisture, lb/a (2014)                                                 |
| 2-year yield average | 2- yr avg           | Average grain yield for 2013 and 2014, lb/a                                                             |
| Grain moisture       | Gr mo               | Grain moisture at harvest, %                                                                            |
| Test weight          | Test wt             | Volume weight of grain, lb/bu                                                                           |
| Heading date         | Mid-head            | Date of head emergence in 50% of plants, days after planting (DAP)                                      |
| Plant height         | Plt ht              | Height from ground to top of head, inches (in)                                                          |
| Head type            | Head type           | Head type is a measure of head architecture, with ratings of 1-5; 1-compact, 3-intermediate, and 5-open |
| Head exertion        | Head exert          | Distance from flag leaf to base of head, in                                                             |
| Midge damage         | Midge               | Average percent of head damaged, %                                                                      |
| Bird damage          | Bird                | Average percent of head damaged, %                                                                      |

## RESULTS

Yield data for 2014 and two-year averages (2013 and 2014) and other agronomic data for each location are presented in Tables 2-11. Yields for the hybrids in the highest-yielding group for 2014 (yields falling within one LSD value) are in bold print. Hybrids in bold print with a single asterisk are in the highest-yielding group for both years, 2013 and 2014. A summary of yield performance for 29 hybrids at seven locations is presented in Table 12. At the Crowley and St. Joseph locations, the OVT's were duplicated, with and without fungicide (Quilt). Only the no-fungicide trials were used to evaluate hybrid performance. In Table 13, participating seed companies are listed. There were five seed companies that participated in the 2014 grain sorghum official variety trials.

The white sugarcane aphid (WSA) is a new insect pest of grain sorghum in Louisiana. This aphid has the ability to cause significant injury and crop death to all stages of grain sorghum. Populations of WSA build very rapidly and are exacerbated by the use of broad-spectrum insecticides for other insects such as sorghum midge and the sorghum headworm complex.

Grain sorghum should be routinely scouted for WSA in early vegetative stages and continued throughout the growing season. Scout by lifting up leaves with your forearm to reveal early aphid colonies. Look for honeydew on lower leaves (will have a sticky, shiny appearance) to locate larger established colonies. The aphid has a whitish, light yellow appearance with dark tips on the cornicles. Preliminary research conducted by the LSU AgCenter has set a threshold at 50 aphids per leaf occurring in 20% of the field. WSA ratings were taken at St. Joseph (Commerce silt loam) (Tables 10 and 11).

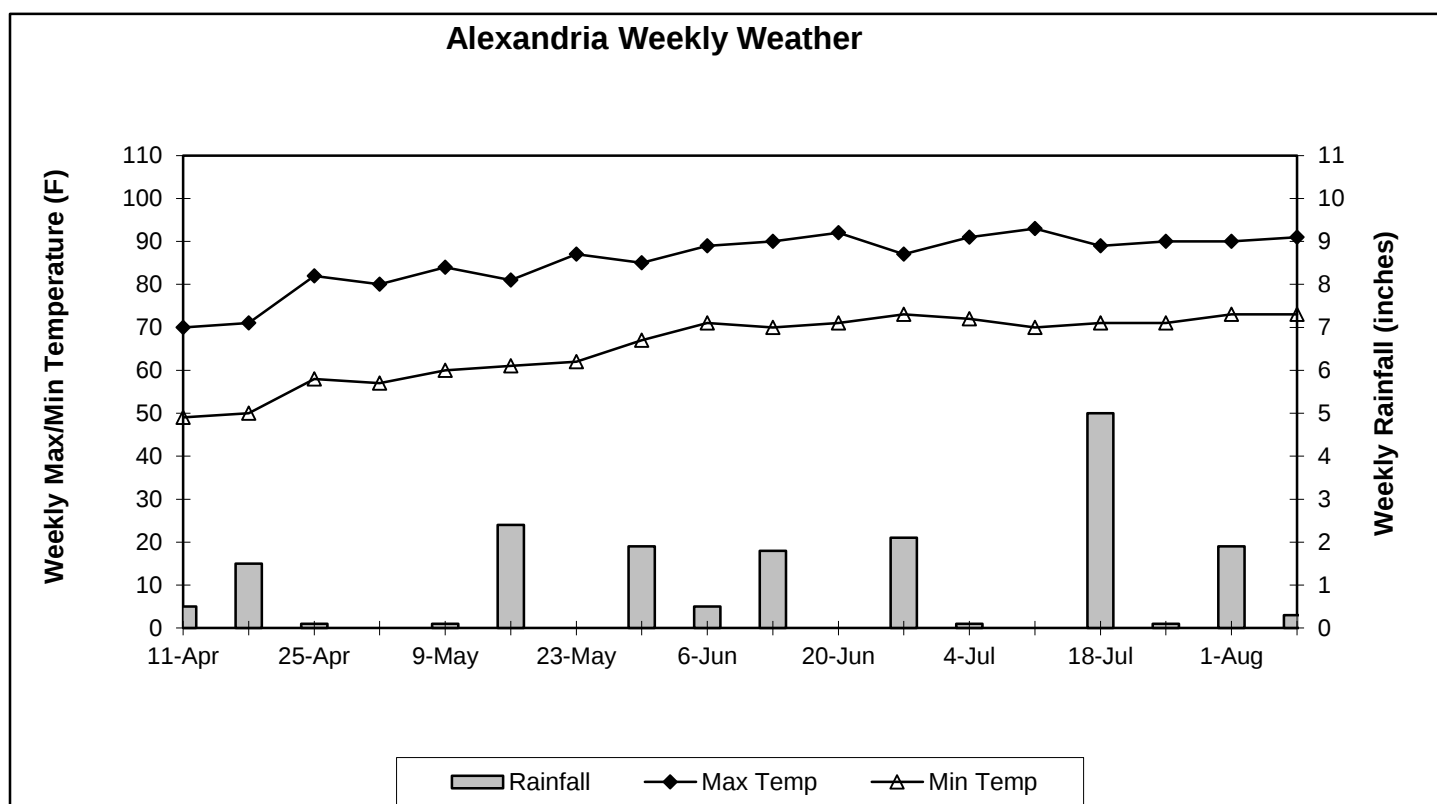
The use of harvest aids may be negatively affected by white sugarcane aphids. Aphid control is not only important for protecting yields but also increasing harvest efficiency. Please visit [www.lsuagcenter.com](http://www.lsuagcenter.com) for more information on recommended insecticides for WSA and other pests in grain sorghum.

## Grain Sorghum Hybrid Performance Trial at the Dean Lee Research Station – Alexandria

### Location Summary

Rainfall was well distributed and temperatures relatively mild over the growing season. Grain yields ranged from 4,932 to 7,275 lb/acre, with a trial average of 6,207 lb/acre (Table 2). Eleven hybrids fell within the highest-yielding group. There were fifteen hybrids with two-year averages; however, no hybrid fell into the highest-yielding group for both 2013 and 2014. Data for other agronomic traits are presented in Table 2.

|               |                                                                                                                                                                                                                                                   |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil type     | Coushatta silt loam                                                                                                                                                                                                                               |
| Row Spacing   | 38 inches                                                                                                                                                                                                                                         |
| Seeding rate  | 7 seed/ft                                                                                                                                                                                                                                         |
| Previous crop | Cotton                                                                                                                                                                                                                                            |
| Planting date | April 2                                                                                                                                                                                                                                           |
| Fertilization | <i>Preplant</i> :175 lb/acre – 0-18-36 (11/14/13);<br><i>Sidedress</i> :150 lb N/acre – 30-0-0-2 (5/2/14);                                                                                                                                        |
| Pesticides    | <i>Preemerg</i> : 1 pt Dual II Magnum/acre and 1.25 qt Atrazine/acre;<br><i>Postemerg</i> : 1.5 qt Roundup/acre plus 1% COC;<br><i>Insecticides</i> : 1 oz Transform/acre (6/21); 2 oz Grizzly Z/acre(6/26, 7/7, 7/22); 2.8 oz Leverage 360/acre; |
| Harvest date  | August 14                                                                                                                                                                                                                                         |



**Table 2. Performance of grain sorghum hybrids at Alexandria, 2014.**

| Brand/hybrid | 2014<br>Yield <sup>1</sup> | 2-yr<br>avg <sup>2</sup> | Gr<br>mo | Test<br>wt | Mid-<br>head | Plt<br>ht | Head<br>type |
|--------------|----------------------------|--------------------------|----------|------------|--------------|-----------|--------------|
|--------------|----------------------------|--------------------------|----------|------------|--------------|-----------|--------------|

|                          | lb/a         | lb/a  | %    | lb/bu | DAP | in | 1-5 |
|--------------------------|--------------|-------|------|-------|-----|----|-----|
| DEKALB DKS53-67          | <b>7,275</b> | 6,852 | 15.4 | 56.1  | 81  | 53 | 3   |
| Sorghum Partners SP6929  | <b>7,146</b> | -     | 16.3 | 54.9  | 79  | 51 | 2   |
| REV® RV9782™             | <b>6,976</b> | 6,820 | 14.4 | 55.7  | 79  | 51 | 2   |
| REV® RV9562™             | <b>6,930</b> | 6,279 | 13.7 | 56.4  | 79  | 52 | 4   |
| Pioneer 83P17            | <b>6,738</b> | 6,732 | 15.9 | 54.0  | 80  | 55 | 3   |
| Sorghum Partners SPX3675 | <b>6,572</b> | -     | 14.0 | 51.1  | 80  | 51 | 3   |
| Sorghum Partners X445    | <b>6,521</b> | -     | 14.0 | 53.6  | 80  | 50 | 2   |
| Sorghum Partners SPX3678 | <b>6,470</b> | -     | 13.0 | 52.8  | 79  | 52 | 5   |
| REV® RV9924™             | <b>6,432</b> | 6,578 | 14.6 | 56.0  | 80  | 55 | 2   |
| Sorghum Partners SPX3550 | <b>6,418</b> | -     | 13.8 | 53.4  | 78  | 46 | 4   |
| Sorghum Partners NK7633  | <b>6,405</b> | -     | 14.3 | 54.7  | 78  | 46 | 3   |
| Pioneer 83P99            | 6,367        | -     | 15.0 | 55.9  | 82  | 54 | 2   |
| Sorghum Partners NK7829  | 6,352        | -     | 17.0 | 54.4  | 81  | 56 | 1   |
| Dyna-Gro M75GB39         | 6,333        | 6,389 | 16.1 | 55.6  | 78  | 49 | 5   |
| Sorghum Partners K73-J6  | 6,230        | -     | 14.1 | 54.1  | 79  | 48 | 3   |
| Dyna-Gro 765B            | 6,209        | 6,561 | 16.2 | 56.4  | 82  | 58 | 2   |
| Sorghum Partners X840    | 6,174        | 6,442 | 15.8 | 55.5  | 81  | 61 | 1   |
| Sorghum Partners SP7868  | 6,137        | 6,448 | 14.2 | 55.8  | 81  | 53 | 1   |
| Sorghum Partners SPX3680 | 5,984        | -     | 15.4 | 52.8  | 79  | 47 | 3   |
| Pioneer 84P80            | 5,974        | 6,476 | 14.7 | 55.0  | 80  | 54 | 4   |
| Dyna-Gro M72GW14         | 5,956        | -     | 14.5 | 55.8  | 84  | 50 | 2   |
| Dyna-Gro M77GB52         | 5,830        | 5,973 | 13.5 | 54.0  | 79  | 51 | 5   |
| Sorghum Partners X865    | 5,810        | 6,178 | 15.2 | 55.2  | 79  | 54 | 2   |
| Dyna-Gro M77GR61         | 5,800        | -     | 14.1 | 52.2  | 83  | 54 | 2   |
| Sorghum Partners X715    | 5,689        | -     | 15.4 | 55.1  | 81  | 48 | 2   |
| Sorghum Partners NK6638  | 5,582        | 5,860 | 13.7 | 53.1  | 79  | 49 | 5   |
| REV® RV9883™             | 5,540        | 6,022 | 16.0 | 53.8  | 79  | 52 | 4   |
| Sorghum Partners X446    | 5,213        | -     | 15.4 | 55.5  | 80  | 44 | 3   |

|                   |              |       |             |             |           |           |           |
|-------------------|--------------|-------|-------------|-------------|-----------|-----------|-----------|
| DEKALB DKS51-01   | 4,932        | 5,891 | 18.5        | 47.8        | 82        | 51        | 4         |
| <b>Average</b>    | <b>6,207</b> | -     | <b>15.0</b> | <b>54.4</b> | <b>80</b> | <b>52</b> | <b>3</b>  |
| <b>CV, %</b>      | <b>12</b>    | -     | <b>11</b>   | <b>4</b>    | <b>2</b>  | <b>7</b>  | <b>30</b> |
| <b>LSD (0.10)</b> | <b>889</b>   | -     | <b>1.9</b>  | <b>2.3</b>  | <b>2</b>  | <b>4</b>  | <b>1</b>  |

<sup>1</sup>Yields in bold denote hybrids that were in the highest-yielding group in 2014.

<sup>2</sup>No hybrid was in the high-yielding group for 2013 and 2014.

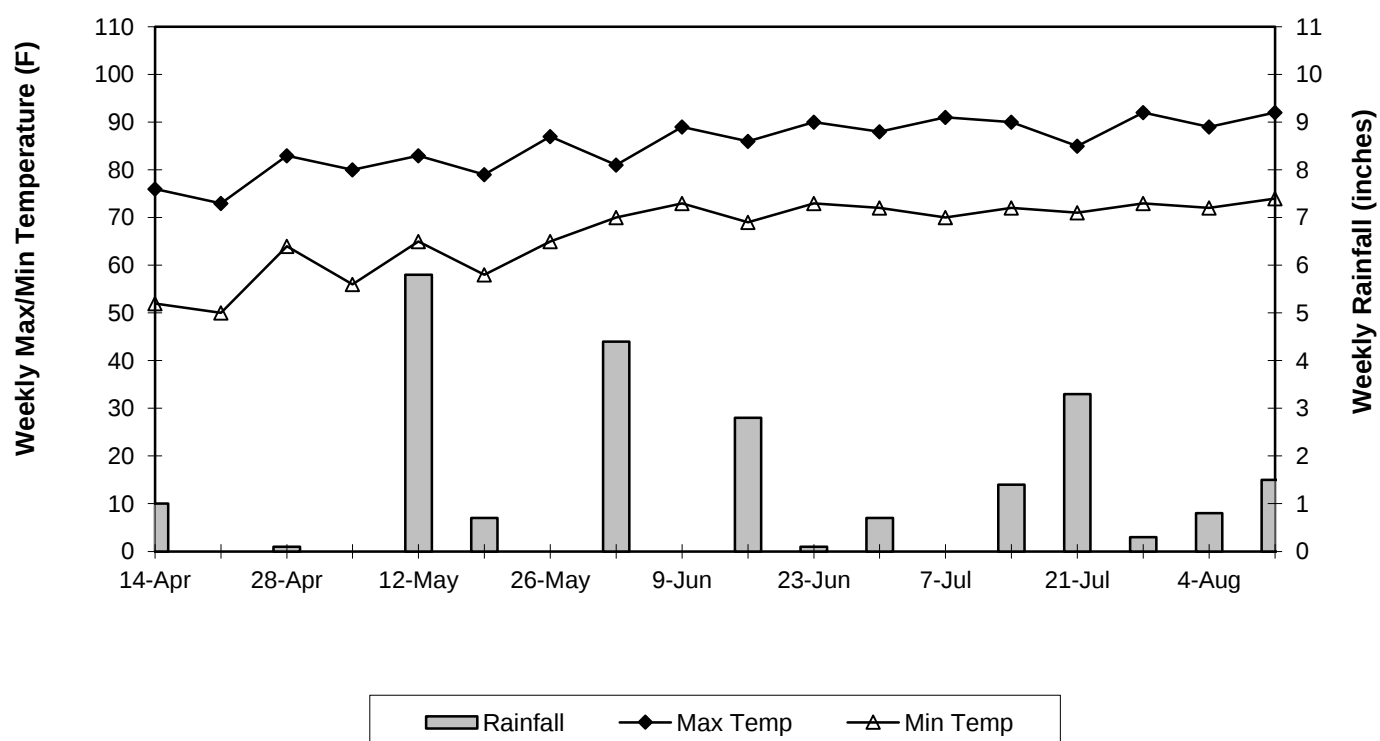
## Grain Sorghum Hybrid Performance Trial at the Central Research Station – Baton Rouge

### Location Summary

Rainfall was plentiful and temperatures relatively mild over the growing season. Yields were low ranging from 2,110 to 3,774 lb/acre, with a trial average of 3002 lb/acre (Table 3). Similarly, test weights were low averaging only 49.9 lb/bu. There were five hybrids that fell into the 2014 highest-yielding group. There was high disease pressure, primarily from anthracnose. Disease ratings averaged 4, 4, and 7 for three rating dates. Bird damage ranged from 5 to 30%, with a trial average of 15%.

|               |                                                                                                                                                                       |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil type     | Commerce silt loam                                                                                                                                                    |
| Row spacing   | 30-inch                                                                                                                                                               |
| Seeding rate  | 5 seed/ft                                                                                                                                                             |
| Previous crop | Soybeans                                                                                                                                                              |
| Planting date | April 17                                                                                                                                                              |
| Fertilization | <i>Sidedress</i> : 95 lb N/acre – 30-0-0-2 (5/8)                                                                                                                      |
| Pesticides    | <i>Preemerg</i> : 1.5 pt Dual/acre and 2.5 qt Atrazine/acre plus 3 oz Tundra/acre;<br><i>Insecticides</i> : 1 oz Transform/acre plus 6 oz Waylaying/acre (6/25, 7/3); |
| Harvest date  | August 4                                                                                                                                                              |

**Baton Rouge Weekly Weather**



**Table 3. Performance of grain sorghum hybrids at Baton Rouge, 2014.**

| <b>Brand/hybrid</b>                  | <b>2014<br/>Yield<sup>1</sup></b> | <b>Gr<br/>mo</b> | <b>Test<br/>wt</b> | <b>Mid-<br/>head</b> | <b>Plt<br/>ht</b> | <b>Bird</b> | <b>Anth<br/>1<sup>2</sup></b> | <b>Anth<br/>2</b> | <b>Anth<br/>3</b> |
|--------------------------------------|-----------------------------------|------------------|--------------------|----------------------|-------------------|-------------|-------------------------------|-------------------|-------------------|
|                                      | lb/a                              | %                | lb/bu              | DAP                  | in                | %           | 0-9                           | 0-9               | 0-9               |
| Sorghum Partners SP7868              | <b>3,774</b>                      | 17.6             | 55.4               | 70                   | 58                | 10          | 5                             | 5                 | 6                 |
| Sorghum Partners X715                | <b>3,597</b>                      | 17.0             | 56.5               | 71                   | 58                | 20          | 4                             | 4                 | 4                 |
| REV <sup>®</sup> RV9782 <sup>™</sup> | <b>3,557</b>                      | 15.0             | 52.2               | 65                   | 56                | 10          | 5                             | 5                 | 6                 |
| Sorghum Partners SPX3550             | <b>3,482</b>                      | 13.8             | 49.9               | 62                   | 46                | 10          | 3                             | 4                 | 9                 |
| Sorghum Partners X865                | <b>3,415</b>                      | 15.5             | 53.0               | 69                   | 62                | 25          | 4                             | 4                 | 5                 |
| Pioneer 83P99                        | 3,308                             | 14.3             | 51.5               | 71                   | 57                | 5           | 7                             | 7                 | 9                 |
| Pioneer 83P17                        | 3,266                             | 19.6             | 51.9               | 71                   | 60                | 15          | 5                             | 5                 | 5                 |
| Sorghum Partners NK6638              | 3,249                             | 14.8             | 52.5               | 71                   | 59                | 20          | 4                             | 4                 | 4                 |
| DEKALB DKS53-67                      | 3,239                             | 14.6             | 52.7               | 67                   | 57                | 10          | 3                             | 4                 | 8                 |
| Dyna-Gro M77GB52                     | 3,192                             | 14.8             | 52.9               | 70                   | 59                | 20          | 4                             | 4                 | 6                 |
| Pioneer 84P80                        | 3,182                             | 13.7             | 49.2               | 69                   | 58                | 25          | 4                             | 5                 | 8                 |
| Sorghum Partners SPX3675             | 3,078                             | 13.6             | 47.1               | 67                   | 52                | 10          | 3                             | 3                 | 7                 |
| REV <sup>®</sup> RV9562 <sup>™</sup> | 3,039                             | 14.3             | 48.0               | 66                   | 57                | 30          | 3                             | 4                 | 9                 |
| Sorghum Partners NK7633              | 2,935                             | 14.3             | 49.0               | 67                   | 55                | 10          | 3                             | 4                 | 7                 |
| Sorghum Partners NK7829              | 2,930                             | 15.1             | 51.2               | 74                   | 58                | 15          | 3                             | 3                 | 5                 |
| Sorghum Partners X445                | 2,884                             | 14.4             | 46.6               | 71                   | 53                | 5           | 4                             | 4                 | 7                 |
| Dyna-Gro M77GR61                     | 2,880                             | 14.2             | 45.8               | 72                   | 60                | 15          | 4                             | 5                 | 7                 |
| REV <sup>®</sup> RV9883 <sup>™</sup> | 2,872                             | 13.9             | 47.1               | 70                   | 58                | 15          | 4                             | 5                 | 8                 |
| Sorghum Partners SPX3680             | 2,842                             | 13.6             | 46.5               | 67                   | 54                | 20          | 3                             | 3                 | 7                 |
| Dyna-Gro 765B                        | 2,798                             | 16.9             | 53.1               | 72                   | 62                | 30          | 4                             | 5                 | 5                 |
| Dyna-Gro M75GB39                     | 2,793                             | 14.1             | 50.7               | 67                   | 53                | 15          | 3                             | 4                 | 9                 |
| DEKALB DKS51-01                      | 2,778                             | 14.5             | 49.8               | 70                   | 61                | 30          | 4                             | 4                 | 6                 |
| Sorghum Partners K73-J6              | 2,759                             | 14.0             | 45.6               | 70                   | 59                | 25          | 4                             | 5                 | 8                 |
| Sorghum Partners SPX3678             | 2,732                             | 14.0             | 44.4               | 64                   | 56                | 10          | 3                             | 3                 | 8                 |
| REV <sup>®</sup> RV9924 <sup>™</sup> | 2,710                             | 14.1             | 48.6               | 70                   | 61                | 20          | 4                             | 5                 | 9                 |
| Sorghum Partners SP6929              | 2,681                             | 14.1             | 48.4               | 67                   | 55                | 10          | 3                             | 4                 | 7                 |

|                       |              |             |             |           |           |           |           |           |           |
|-----------------------|--------------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sorghum Partners X840 | 2,557        | 21.0        | 53.3        | 70        | 73        | 30        | 5         | 6         | 5         |
| Sorghum Partners X446 | 2,418        | 13.8        | 48.2        | 68        | 47        | 25        | 5         | 6         | 7         |
| Dyna-Gro M72GW14      | 2,110        | 14.4        | 47.7        | 74        | 56        | 5         | 2         | 3         | 6         |
| <b>Average</b>        | <b>3,002</b> | <b>15.0</b> | <b>49.9</b> | <b>69</b> | <b>57</b> | <b>15</b> | <b>4</b>  | <b>4</b>  | <b>7</b>  |
| <b>CV, %</b>          | <b>11</b>    | <b>5</b>    | <b>2</b>    | <b>1</b>  | <b>2</b>  | <b>55</b> | <b>38</b> | <b>34</b> | <b>12</b> |
| <b>LSD (0.10)</b>     | <b>382</b>   | <b>0.8</b>  | <b>1.4</b>  | <b>2</b>  | <b>2</b>  | <b>10</b> | <b>2</b>  | <b>2</b>  | <b>1</b>  |

<sup>1</sup>Yields in bold denote hybrids that were in the highest-yielding group in 2014. There was no two-year average because 2013 trial data was discarded.

<sup>2</sup>Anthracnose (Anth) ratings 1,2, and 3 were taken on July 2, 10, and 23. Ratings are 0-9, 0=no symptoms and 9 severe symptoms.

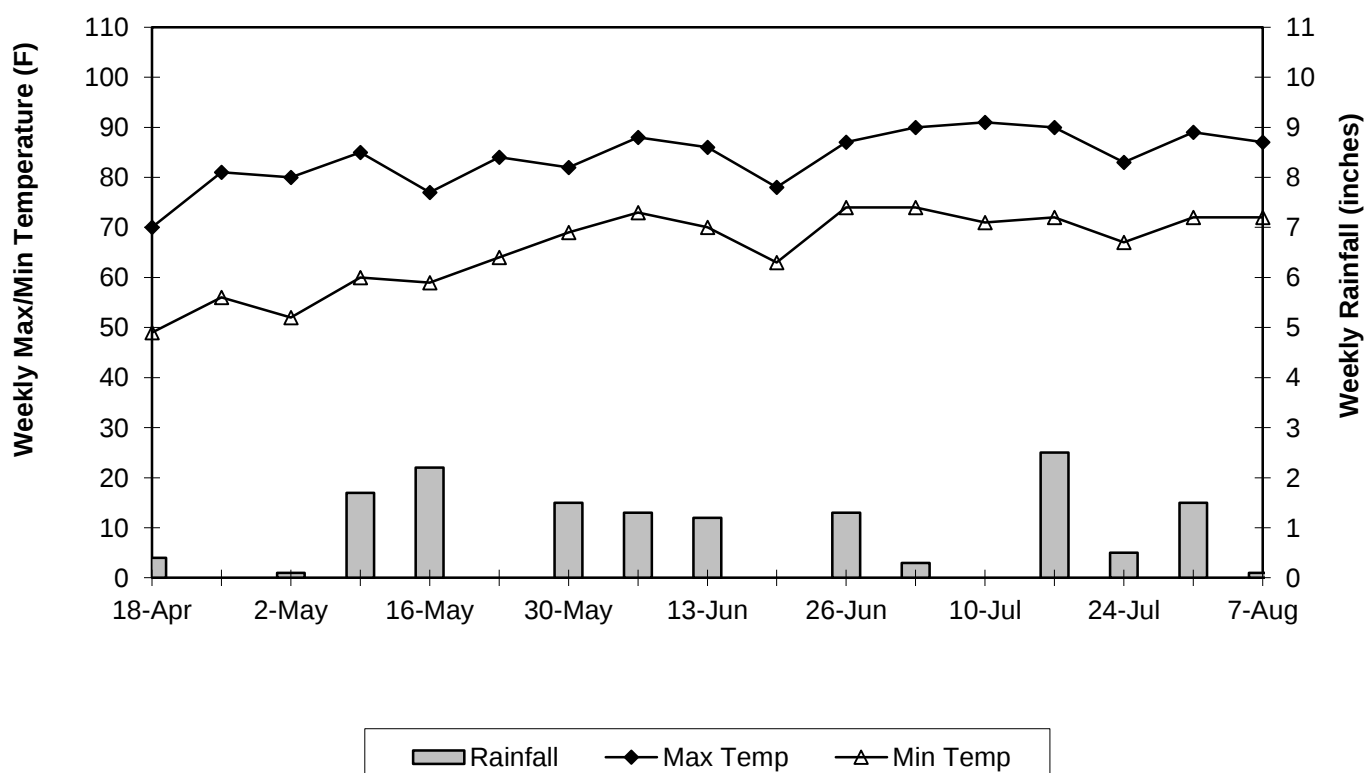
## Grain Sorghum Hybrid Performance Trial at the Red River Research Station – Bossier City

### Location Summary

Rainfall was about normal with relatively mild temperatures over the growing season. Grain yields ranged from 3,987 to 6,386 lb/acre, with a trial average of 5,194 lb/acre (Table 4). There were nine hybrids that fell into the highest-yielding group in 2014. Only one hybrid (Pioneer 83P17) fell into the high-yielding group for both 2013 and 2014. Although lodging was not wide spread, there appeared to be a correlation between yield and lodging.

|               |                                                                                                                                                                                                            |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil type     | Moreland silty clay loam                                                                                                                                                                                   |
| Row spacing   | 40 inches                                                                                                                                                                                                  |
| Seeding rate  | 7 seed/ft                                                                                                                                                                                                  |
| Previous crop | Cotton                                                                                                                                                                                                     |
| Planting date | April 23                                                                                                                                                                                                   |
| Fertilization | <i>Sidedress</i> : 150 lb N/acre – 30-0-0-2 (5/20)                                                                                                                                                         |
| Pesticides    | <i>Preemerg</i> : 2.75 pt Guardsman Max/acre plus 1.5 pt Gramoxone/acre (4/24);<br><i>Postemerg</i> : 1.5 pt Gramoxone/acre (post direct, 7/17);<br><i>Insecticides</i> : 3 oz Karate/acre (7/1 and 7/16); |
| Harvest date  | August 13-14                                                                                                                                                                                               |

**Bossier City Weekly Weather**



**Table 4. Performance of grain sorghum hybrids at Bossier City, 2014.**

| <b>Brand/hybrid</b>      | <b>2014<br/>Yield<sup>1</sup></b> | <b>2-yr<br/>avg<sup>2</sup></b> | <b>Gr<br/>mo</b> | <b>Test<br/>wt</b> | <b>Mid-<br/>head</b> | <b>Plt<br/>ht</b> | <b>Lo</b> | <b>Head<br/>exert</b> | <b>Head<br/>type</b> | <b>Bird</b> |
|--------------------------|-----------------------------------|---------------------------------|------------------|--------------------|----------------------|-------------------|-----------|-----------------------|----------------------|-------------|
|                          | lb/a                              | lb/a                            | %                | lb/bu              | DAP                  | in                | %         | in                    | 1-5                  | %           |
| Sorghum Partners NK7633  | <b>6,386</b>                      | -                               | 14.2             | 56.1               | 62                   | 55                | 0         | 8                     | 2                    | 0           |
| <b>Pioneer 83P17*</b>    | <b>6,241</b>                      | 7,112                           | 15.7             | 55.8               | 65                   | 61                | 0         | 5                     | 4                    | 20          |
| DEKALB DKS51-01          | <b>6,045</b>                      | 6,713                           | 14.5             | 57.7               | 63                   | 65                | 0         | 5                     | 3                    | 25          |
| Sorghum Partners X865    | <b>5,944</b>                      | 6,738                           | 14.6             | 57.9               | 64                   | 62                | 0         | 4                     | 1                    | 20          |
| REV® RV9924™             | <b>5,803</b>                      | 6,609                           | 14.0             | 56.5               | 63                   | 64                | 10        | 4                     | 2                    | 20          |
| DEKALB DKS53-67          | <b>5,773</b>                      | 6,296                           | 15.9             | 57.7               | 62                   | 60                | 0         | 7                     | 2                    | 15          |
| Sorghum Partners SPX3680 | <b>5,773</b>                      | -                               | 13.1             | 55.8               | 60                   | 57                | 0         | 3                     | 3                    | 20          |
| Pioneer 83P99            | <b>5,758</b>                      | -                               | 14.5             | 57.1               | 64                   | 58                | 0         | 2                     | 3                    | 15          |
| Sorghum Partners NK7829  | <b>5,721</b>                      | -                               | 15.7             | 56.4               | 63                   | 62                | 0         | 7                     | 2                    | 20          |
| REV® RV9562™             | 5,473                             | 6,356                           | 13.4             | 57.9               | 60                   | 61                | 0         | 5                     | 2                    | 30          |
| Dyna-Gro 765B            | 5,431                             | 6,681                           | 15.5             | 56.7               | 63                   | 64                | 0         | 6                     | 3                    | 15          |
| Dyna-Gro M75GB39         | 5,357                             | 6,203                           | 14.2             | 57.4               | 62                   | 53                | 0         | 5                     | 4                    | 20          |
| Sorghum Partners SP6929  | 5,282                             | -                               | 15.1             | 56.8               | 63                   | 52                | 0         | 3                     | 1                    | 15          |
| REV® RV9883™             | 5,280                             | 6,376                           | 13.6             | 56.9               | 63                   | 63                | 0         | 5                     | 3                    | 15          |
| Pioneer 84P80            | 5,267                             | 6,442                           | 14.1             | 56.5               | 65                   | 60                | 0         | 4                     | 2                    | 10          |
| Sorghum Partners K73-J6  | 5,240                             | -                               | 14.2             | 61.8               | 62                   | 61                | 0         | 4                     | 3                    | 20          |
| REV® RV9782™             | 5,201                             | 6,052                           | 14.3             | 59.4               | 62                   | 57                | 0         | 3                     | 2                    | 15          |
| Sorghum Partners X445    | 5,071                             | -                               | 13.0             | 54.7               | 63                   | 55                | 0         | 8                     | 2                    | 5           |
| Dyna-Gro M72GW14         | 4,904                             | -                               | 14.3             | 58.3               | 66                   | 60                | 0         | 8                     | 1                    | 0           |
| Sorghum Partners SPX3678 | 4,808                             | -                               | 12.0             | 54.0               | 61                   | 59                | 0         | 5                     | 3                    | 0           |
| Sorghum Partners SP7868  | 4,779                             | 5,876                           | 14.9             | 57.0               | 64                   | 61                | 0         | 10                    | 2                    | 15          |
| Dyna-Gro M77GR61         | 4,749                             | -                               | 14.0             | 54.2               | 64                   | 65                | 5         | 8                     | 3                    | 15          |
| Sorghum Partners SPX3675 | 4,691                             | -                               | 12.3             | 53.1               | 63                   | 52                | 10        | 2                     | 3                    | 10          |
| Sorghum Partners X715    | 4,629                             | -                               | 17.2             | 58.0               | 67                   | 56                | 0         | 7                     | 2                    | 5           |
| Sorghum Partners NK6638  | 4,452                             | 5,543                           | 13.6             | 56.4               | 61                   | 60                | 30        | 6                     | 3                    | 25          |
| Dyna-Gro M77GB52         | 4,304                             | 5,325                           | 13.5             | 56.0               | 61                   | 58                | 10        | 5                     | 3                    | 20          |

| <b>Brand/hybrid</b>      | <b>2014<br/>Yield<sup>1</sup></b> | <b>2-yr<br/>avg<sup>2</sup></b> | <b>Gr<br/>mo</b> | <b>Test<br/>wt</b> | <b>Mid-<br/>head</b> | <b>Plt<br/>ht</b> | <b>Lo</b>  | <b>Head<br/>exert</b> | <b>Head<br/>type</b> | <b>Bird</b> |
|--------------------------|-----------------------------------|---------------------------------|------------------|--------------------|----------------------|-------------------|------------|-----------------------|----------------------|-------------|
|                          | lb/a                              | lb/a                            | %                | lb/bu              | DAP                  | in                | %          | in                    | 1-5                  | %           |
| Sorghum Partners X446    | 4,170                             | -                               | 14.0             | 55.7               | 62                   | 48                | 0          | 5                     | 3                    | 5           |
| Sorghum Partners X840    | 4,080                             | 5,389                           | 14.1             | 57.3               | 63                   | 74                | 10         | 12                    | 1                    | 10          |
| Sorghum Partners SPX3550 | 3,987                             | -                               | 13.5             | 51.7               | 61                   | 54                | 0          | 7                     | 3                    | 0           |
| <b>Average</b>           | <b>5,194</b>                      | <b>-</b>                        | <b>14.2</b>      | <b>56.6</b>        | <b>63</b>            | <b>59</b>         | <b>5</b>   | <b>5</b>              | <b>2</b>             | <b>15</b>   |
| <b>CV, %</b>             | <b>11</b>                         | <b>-</b>                        | <b>5</b>         | <b>4</b>           | <b>3</b>             | <b>4</b>          | <b>364</b> | <b>34</b>             | <b>22</b>            | <b>46</b>   |
| <b>LSD (0.10)</b>        | <b>670</b>                        | <b>-</b>                        | <b>0.9</b>       | <b>2.5</b>         | <b>2</b>             | <b>2</b>          | <b>10</b>  | <b>2</b>              | <b>1</b>             | <b>5</b>    |

<sup>1</sup>Yields in bold denote hybrids that were in the highest-yielding group in 2014.

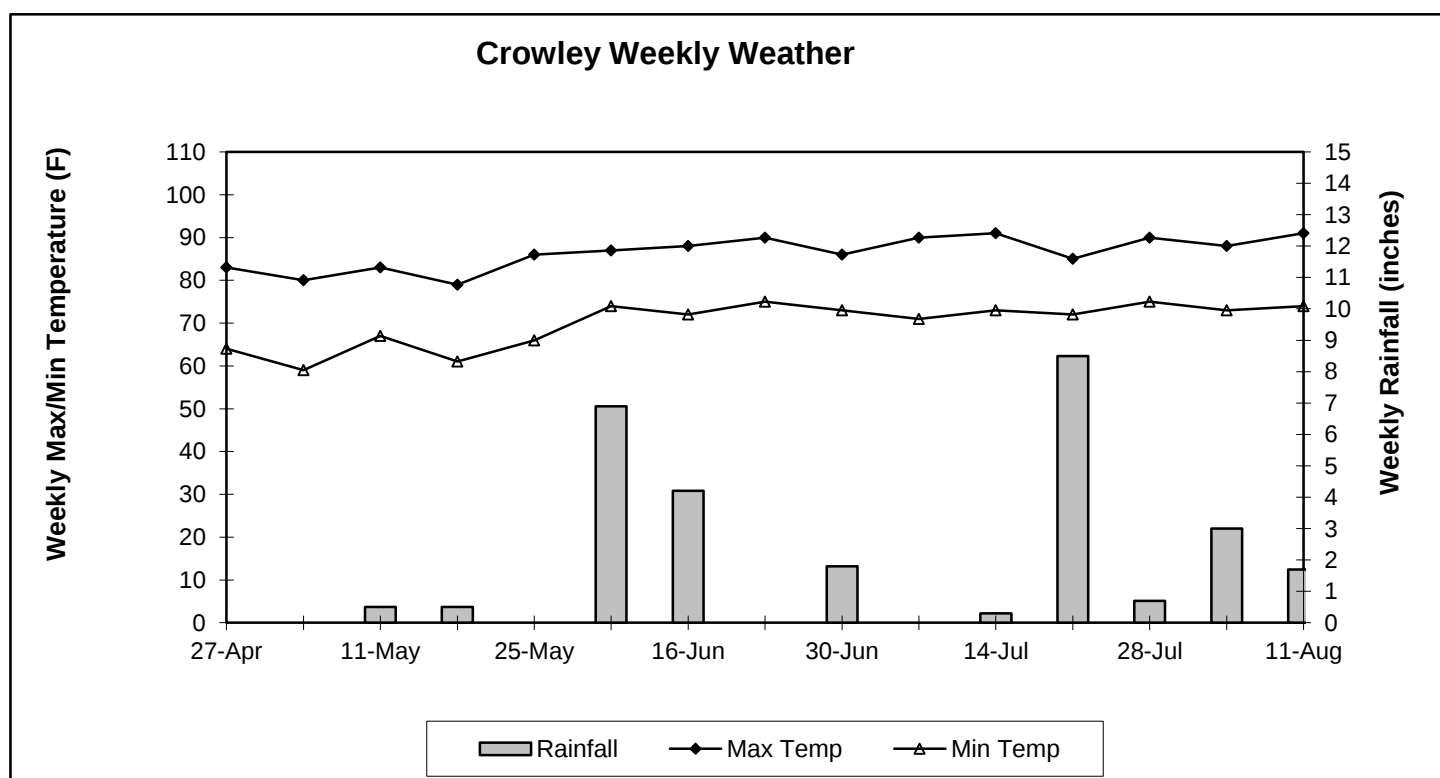
<sup>2</sup>Hybrids in bold with an asterisk (\*) were in the highest-yielding group for both years, 2013 and 2014.

## Grain Sorghum Hybrid Performance Trial at the Rice Research Station – Crowley

### Location Summary

Rainfall was relatively high, but not well distributed. Temperatures were below 90 over the growing season. The trial was duplicated, with one receiving no fungicide (Table 5) and one receiving fungicide (Quilt) (Table 6). Grain yields ranged from 2,998 to 5,979 lb/acre, with a trial average of 4,771 in no-fungicide trial and yields ranged from 3,333 to 6,181 lb/acre, with a trial average of 4,929 lb/acre in fungicide trial. Based on disease ratings, there appeared to be a difference among hybrids for disease occurrence, primarily anthracnose and an apparent correlation between yield and disease pressure. White sugarcane aphids were also a problem, requiring two applications of Transform.

|               |                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil type     | Crowley silt loam                                                                                                                                                                                                           |
| Row spacing   | 30 inches                                                                                                                                                                                                                   |
| Seeding rate  | 5 seed/ft                                                                                                                                                                                                                   |
| Previous crop | Grain sorghum                                                                                                                                                                                                               |
| Planting date | April 23                                                                                                                                                                                                                    |
| Fertilization | <i>Sidedress:</i> 235 lb/acre – 0-24-24-2.8 (5/12);<br>120 lb N/acre – 46-0-0 (5/26);                                                                                                                                       |
| Pesticides    | <i>Postemerge:</i> 1.5 pt Charger Max/acre plus 3.2 pt Atrazine/acre (May 12); 1.5 pt Charger Max/acre (5/27);<br><i>Insecticides:</i> 4 oz Belt/acre (5/23); 1 oz Transform/acre (7/29) and 1.25 oz Transform/acre (7/29); |
| Harvest date  | August 15                                                                                                                                                                                                                   |



**Table 5. Performance of grain sorghum hybrids with no fungicide at Crowley, 2014.**

| <b>Brand/hybrid</b>             | <b>2014<br/>Yield<sup>1</sup></b> | <b>2-yr<br/>avg<sup>2</sup></b> | <b>Gr<br/>mo</b> | <b>Test<br/>wt</b> | <b>Mid-<br/>head</b> | <b>Plt<br/>ht</b> | <b>Head<br/>exert</b> | <b>Head<br/>type</b> | <b>Leaf<br/>dis<sup>3</sup></b> |
|---------------------------------|-----------------------------------|---------------------------------|------------------|--------------------|----------------------|-------------------|-----------------------|----------------------|---------------------------------|
|                                 | lb/a                              | lb/a                            | %                | lb/bu              | DAP                  | in                | in                    | 1-5                  | 1-10                            |
| Pioneer 83P17                   | <b>5,979</b>                      | 5,694                           | 19.5             | 52.6               | 72                   | 57                | 4                     | 2                    | 1                               |
| Dyna-Gro 765B                   | <b>5,936</b>                      | 5,580                           | 19.1             | 53.3               | 72                   | 59                | 5                     | 2                    | 1                               |
| DEKALB DKS51-01                 | <b>5,892</b>                      | 5,687                           | 15.2             | 56.2               | 67                   | 56                | 6                     | 3                    | 1                               |
| <b>Sorghum Partners SP7868*</b> | <b>5,657</b>                      | 5,585                           | 17.6             | 54.6               | 70                   | 54                | 8                     | 2                    | 0                               |
| Sorghum Partners X715           | <b>5,567</b>                      | -                               | 17.0             | 55.1               | 67                   | 54                | 7                     | 3                    | 1                               |
| Sorghum Partners NK6638         | 5,526                             | 5,680                           | 15.8             | 55.9               | 67                   | 55                | 7                     | 3                    | 2                               |
| Sorghum Partners X840           | 5,521                             | 5,045                           | 19.3             | 53.3               | 71                   | 65                | 7                     | 2                    | 1                               |
| Sorghum Partners X865           | 5,449                             | 5,433                           | 16.1             | 55.8               | 65                   | 58                | 6                     | 2                    | 0                               |
| DEKALB DKS53-67                 | 5,363                             | 5,795                           | 15.4             | 55.7               | 66                   | 53                | 8                     | 3                    | 4                               |
| Dyna-Gro M77GB52                | 5,350                             | 5,473                           | 15.9             | 55.8               | 64                   | 57                | 8                     | 4                    | 1                               |
| REV® RV9782™                    | 5,197                             | 5,627                           | 16.5             | 55.3               | 63                   | 53                | 7                     | 3                    | 3                               |
| Sorghum Partners K73-J6         | 5,099                             | -                               | 15.7             | 55.8               | 67                   | 53                | 8                     | 3                    | 4                               |
| Sorghum Partners NK7633         | 5,076                             | -                               | 14.0             | 56.8               | 65                   | 53                | 9                     | 3                    | 3                               |
| Sorghum Partners NK7829         | 5,024                             | -                               | 18.6             | 53.5               | 72                   | 54                | 6                     | 2                    | 2                               |
| Pioneer 83P99                   | 5,003                             | -                               | 15.6             | 56.0               | 69                   | 54                | 4                     | 3                    | 5                               |
| Pioneer 84P80                   | 4,853                             | 5,493                           | 13.6             | 57.1               | 64                   | 53                | 4                     | 4                    | 5                               |
| Dyna-Gro M77GR61                | 4,756                             | -                               | 16.0             | 55.3               | 69                   | 59                | 5                     | 2                    | 3                               |
| REV® RV9924™                    | 4,746                             | 5,470                           | 13.8             | 57.0               | 64                   | 56                | 5                     | 3                    | 5                               |
| Sorghum Partners SP6929         | 4,630                             | -                               | 15.4             | 55.7               | 64                   | 51                | 7                     | 3                    | 3                               |
| REV® RV9883™                    | 4,581                             | 5,235                           | 15.4             | 55.9               | 63                   | 56                | 7                     | 3                    | 5                               |
| REV® RV9562™                    | 4,463                             | 5,055                           | 14.3             | 56.6               | 64                   | 53                | 9                     | 5                    | 6                               |
| Sorghum Partners X445           | 4,270                             | -                               | 15.6             | 55.7               | 70                   | 48                | 6                     | 2                    | 2                               |
| Dyna-Gro M72GW14                | 4,142                             | -                               | 16.1             | 55.3               | 74                   | 53                | 7                     | 2                    | 1                               |
| Sorghum Partners SPX3680        | 3,720                             | -                               | 13.2             | 57.1               | 64                   | 51                | 7                     | 3                    | 6                               |
| Sorghum Partners SPX3550        | 3,552                             | -                               | 11.5             | 58.0               | 58                   | 46                | 5                     | 4                    | 8                               |
| Sorghum Partners SPX3675        | 3,517                             | -                               | 12.6             | 57.3               | 64                   | 49                | 3                     | 3                    | 6                               |
| Sorghum Partners SPX3678        | 3,372                             | -                               | 13.1             | 57.0               | 62                   | 53                | 5                     | 4                    | 5                               |

|                       |              |          |             |             |           |           |           |           |           |
|-----------------------|--------------|----------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|
| Dyna-Gro M75GB39      | 3,118        | 4,523    | 15.9        | 55.4        | 63        | 49        | 9         | 5         | 7         |
| Sorghum Partners X446 | 2,998        | -        | 17.1        | 54.4        | 67        | 43        | 5         | 3         | 2         |
| <b>Average</b>        | <b>4,771</b> | <b>-</b> | <b>15.7</b> | <b>55.6</b> | <b>66</b> | <b>54</b> | <b>6</b>  | <b>3</b>  | <b>3</b>  |
| <b>CV, %</b>          | <b>88</b>    | <b>-</b> | <b>8</b>    | <b>2</b>    | <b>3</b>  | <b>4</b>  | <b>38</b> | <b>17</b> | <b>27</b> |
| <b>LSD (0.10)</b>     | <b>446</b>   | <b>-</b> | <b>1.4</b>  | <b>1.1</b>  | <b>3</b>  | <b>3</b>  | <b>3</b>  | <b>1</b>  | <b>1</b>  |

<sup>1</sup>Yields in bold denote hybrids that were in the highest-yielding group in 2014.

<sup>2</sup>Hybrids in bold with an asterisk (\*) were in the highest-yielding group for both years, 2013 and 2014.

<sup>3</sup>Leaf diseases (dis) present were mostly anthracnose on leaves and some zonate. Ratings, 1-10, with 1 having no symptoms and 10 having severe symptoms.

**Table 6. Performance of grain sorghum hybrids with fungicide<sup>1</sup> at Crowley, 2014.**

| <b>Brand/hybrid</b>                  | <b>Yield</b> | <b>Gr<br/>mo</b> | <b>Test<br/>wt</b> | <b>Mid-<br/>head</b> | <b>Plt<br/>ht</b> | <b>Head<br/>exert</b> | <b>Head<br/>type</b> | <b>Leaf<br/>dis</b> |
|--------------------------------------|--------------|------------------|--------------------|----------------------|-------------------|-----------------------|----------------------|---------------------|
|                                      | lb/a         | %                | lb/bu              | DAP                  | in                | in                    | 1-5                  | 1-10                |
| DEKALB DKS51-01                      | 6,181        | 14.4             | 56.8               | 65                   | 57                | 8                     | 3                    | 1                   |
| Sorghum Partners NK6638              | 6,049        | 14.6             | 56.6               | 62                   | 55                | 4                     | 3                    | 1                   |
| Pioneer 83P17                        | 5,904        | 18.8             | 53.4               | 68                   | 60                | 5                     | 2                    | 0                   |
| Dyna-Gro 765B                        | 5,782        | 19.2             | 53.2               | 69                   | 58                | 4                     | 2                    | 0                   |
| Sorghum Partners SP7868              | 5,590        | 16.9             | 55.2               | 64                   | 54                | 9                     | 2                    | 1                   |
| Sorghum Partners X840                | 5,575        | 18.4             | 54.0               | 70                   | 64                | 7                     | 1                    | 0                   |
| DEKALB DKS53-67                      | 5,566        | 14.9             | 56.5               | 63                   | 52                | 4                     | 3                    | 2                   |
| Pioneer 83P99                        | 5,500        | 15.1             | 56.4               | 67                   | 54                | 5                     | 2                    | 4                   |
| Sorghum Partners X715                | 5,500        | 17.2             | 54.9               | 66                   | 56                | 7                     | 3                    | 0                   |
| Sorghum Partners K73-J6              | 5,376        | 13.2             | 57.5               | 64                   | 55                | 7                     | 3                    | 3                   |
| REV <sup>®</sup> RV9782 <sup>™</sup> | 5,264        | 16.9             | 55.0               | 63                   | 52                | 5                     | 3                    | 1                   |
| Sorghum Partners X865                | 5,141        | 17.3             | 54.6               | 62                   | 59                | 8                     | 2                    | 0                   |
| Dyna-Gro M77GR61                     | 5,126        | 13.7             | 57.0               | 64                   | 55                | 7                     | 3                    | 1                   |
| Sorghum Partners NK7633              | 5,055        | 13.8             | 56.9               | 62                   | 52                | 11                    | 3                    | 2                   |
| Sorghum Partners NK7829              | 4,930        | 18.2             | 53.7               | 70                   | 55                | 7                     | 2                    | 1                   |
| Pioneer 84P80                        | 4,925        | 14.1             | 56.7               | 62                   | 53                | 4                     | 3                    | 4                   |
| Dyna-Gro M77GB52                     | 4,918        | 15.7             | 55.7               | 62                   | 54                | 7                     | 4                    | 1                   |
| Dyna-Gro M72GW14                     | 4,894        | 15.1             | 56.3               | 73                   | 53                | 7                     | 2                    | 0                   |
| Sorghum Partners SP6929              | 4,890        | 15.4             | 55.8               | 65                   | 52                | 6                     | 3                    | 2                   |

|                          |              |             |             |           |           |           |           |           |
|--------------------------|--------------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|
| REV® RV9883™             | 4,751        | 13.9        | 56.9        | 62        | 52        | 7         | 4         | 4         |
| REV® RV9924™             | 4,666        | 14.5        | 56.5        | 63        | 53        | 6         | 3         | 4         |
| REV® RV9562™             | 4,402        | 15.4        | 55.6        | 63        | 52        | 7         | 4         | 5         |
| Sorghum Partners X445    | 4,304        | 15.5        | 56.0        | 69        | 46        | 6         | 2         | 2         |
| Sorghum Partners SPX3680 | 4,280        | 13.0        | 57.4        | 63        | 52        | 6         | 3         | 4         |
| Sorghum Partners SPX3550 | 4,085        | 12.7        | 57.6        | 57        | 46        | 8         | 4         | 5         |
| Dyna-Gro M75GB39         | 3,897        | 14.6        | 56.5        | 62        | 47        | 9         | 4         | 7         |
| Sorghum Partners SPX3675 | 3,635        | 12.3        | 57.6        | 58        | 50        | 6         | 4         | 5         |
| Sorghum Partners SPX3678 | 3,482        | 12.6        | 57.4        | 59        | 54        | 7         | 4         | 4         |
| Sorghum Partners X446    | 3,333        | 15.7        | 55.8        | 64        | 43        | 4         | 3         | 1         |
| <b>Average</b>           | <b>4,929</b> | <b>15.3</b> | <b>56.0</b> | <b>64</b> | <b>53</b> | <b>6</b>  | <b>3</b>  | <b>2</b>  |
| <b>CV, %</b>             | <b>8</b>     | <b>9</b>    | <b>2</b>    | <b>3</b>  | <b>4</b>  | <b>30</b> | <b>19</b> | <b>30</b> |
| <b>LSD (0.10)</b>        | <b>473</b>   | <b>1.6</b>  | <b>1.3</b>  | <b>1</b>  | <b>2</b>  | <b>2</b>  | <b>1</b>  | <b>1</b>  |

<sup>1</sup>The fungicide Quilt was applied (June 20) at 14 oz/acre across the entire trial.

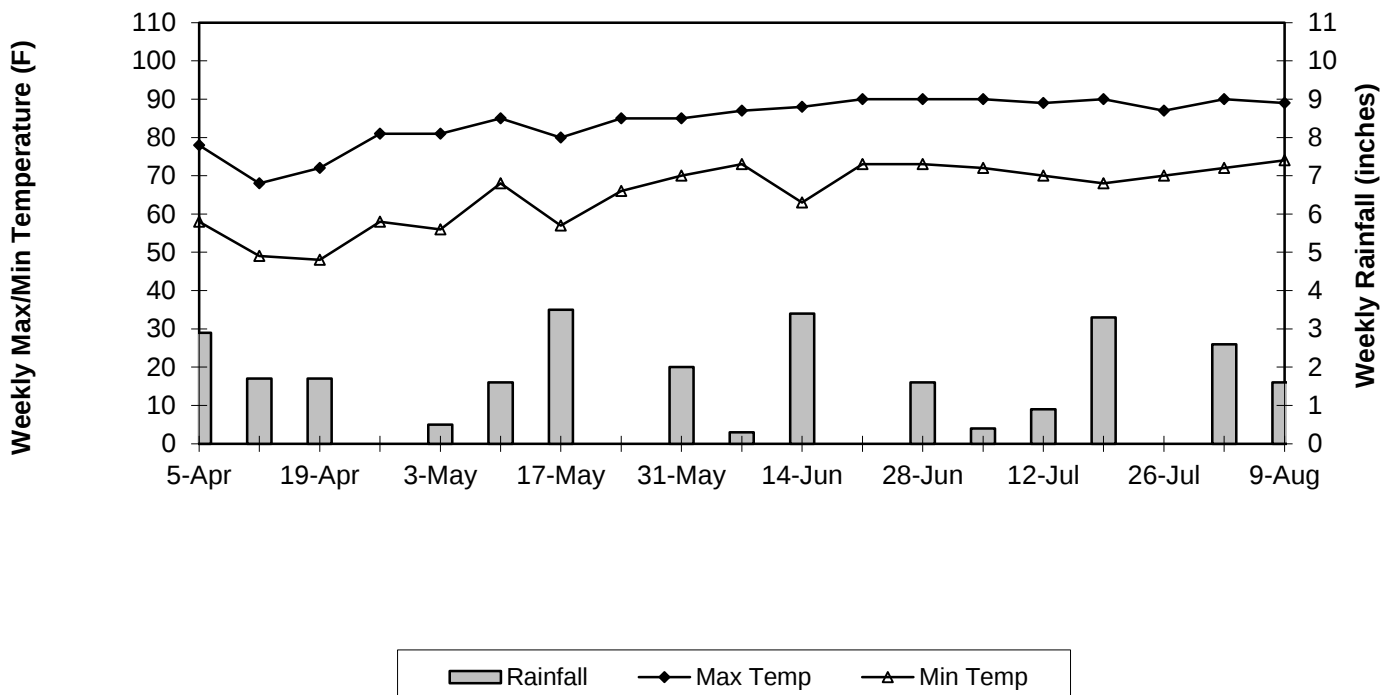
# Grain Sorghum Hybrid Performance Trial on Commerce silt loam at the Northeast Research Station – St. Joseph

## Location Summary

Rainfall was well distributed and temperatures remained below 90. The trial was duplicated, one with no fungicide (Table 7) and one with fungicide (Table 8). Grain yields ranged from 4,508 to 6,612 lb/acre, with a trial average of 5,726 lb/acre for the no-fungicide trial and yields ranged from 4,325 to 7,067 lb/acre, with a trial average of 5,904 lb/acre in the fungicide trial. Disease ratings, primarily corn northern leaf blight, were relatively low. There were fourteen hybrids that fell into the 2014 high-yielding group (Table 7) and two hybrids, Pioneer 84P80 and REV RV9562 that fell in high-yielding group both years, 2013 and 2014. Test weights were relatively low in both trials.

|               |                                                                                                                                                                                                                                                                                                                                              |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil type     | Commerce silt loam                                                                                                                                                                                                                                                                                                                           |
| Row spacing   | 40 inches                                                                                                                                                                                                                                                                                                                                    |
| Seeding rate  | 7 seed/ft                                                                                                                                                                                                                                                                                                                                    |
| Previous crop | Cotton                                                                                                                                                                                                                                                                                                                                       |
| Planting date | April 11                                                                                                                                                                                                                                                                                                                                     |
| Fertilization | <i>Sidedress</i> : 120 lb N/acre – 30-0-0-2 (5/1)                                                                                                                                                                                                                                                                                            |
| Pesticides    | <i>Burndown</i> : 1.4 pt Roundup/acre plus 1.5 pt 2,4-D/acre (2/4);<br><i>Preemergence</i> : 1.4 pt Roundup/acre (4/13);<br><i>Postemergence</i> : 3 qt Lexar/acre (4/27); 2 qt Atrazine/acre plus 1.5 pt Parallel/acre;<br><i>Insecticides</i> : 2.5 oz Baythroid/acre (6/20, 7/1); 2.5 oz Baythroid/acre plus 12 oz Prevathon/acre (6/25); |
| Harvest date  | August 21-22                                                                                                                                                                                                                                                                                                                                 |

St. Joseph Weekly Weather



**Table 7. Performance of grain sorghum hybrids with no fungicide on Commerce silt loam at St. Joseph, 2014.**

| <b>Brand/hybrid</b>      | <b>2014<br/>Yield<sup>1</sup></b> | <b>2-yr<br/>avg<sup>2</sup></b> | <b>Gr<br/>mo</b> | <b>Test<br/>wt</b> | <b>Mid-<br/>head</b> | <b>Plt<br/>ht</b> | <b>Head<br/>exert</b> | <b>Head<br/>type</b> | <b>Dis<sup>3</sup></b> | <b>Midge</b> | <b>Bird</b> |
|--------------------------|-----------------------------------|---------------------------------|------------------|--------------------|----------------------|-------------------|-----------------------|----------------------|------------------------|--------------|-------------|
|                          | lb/a                              | lb/a                            | %                | lb/bu              | DAP                  | in                | in                    | 1-5                  | 0-9                    | %            | %           |
| REV® RV9924™             | <b>6,612</b>                      | 6,565                           | 14.0             | 55.3               | 70                   | 63                | 6                     | 3                    | 1                      | 5            | 5           |
| <b>REV® RV9562™ *</b>    | <b>6,561</b>                      | 6,879                           | 14.9             | 55.5               | 69                   | 58                | 5                     | 3                    | 1                      | 10           | 5           |
| Pioneer 83P17            | <b>6,553</b>                      | 6,592                           | 17.6             | 52.1               | 71                   | 62                | 4                     | 4                    | 2                      | 0            | 15          |
| Dyna-Gro M75GB39         | <b>6,495</b>                      | 6,479                           | 15.6             | 56.8               | 66                   | 50                | 5                     | 4                    | 3                      | 0            | 5           |
| REV® RV9782™             | <b>6,487</b>                      | 6,630                           | 15.9             | 56.0               | 66                   | 55                | 5                     | 3                    | 2                      | 0            | 5           |
| Sorghum Partners SP7868  | <b>6,297</b>                      | 5,791                           | 16.3             | 56.4               | 70                   | 60                | 8                     | 2                    | 1                      | 5            | 5           |
| DEKALB DKS51-01          | <b>6,271</b>                      | 6,321                           | 14.1             | 56.9               | 70                   | 64                | 7                     | 3                    | 2                      | 5            | 10          |
| <b>Pioneer 84P80*</b>    | <b>6,220</b>                      | 6,789                           | 16.7             | 54.8               | 73                   | 57                | 3                     | 2                    | 1                      | 0            | 10          |
| DEKALB DKS53-67          | <b>6,204</b>                      | 6,505                           | 16.8             | 54.9               | 70                   | 60                | 5                     | 3                    | 1                      | 5            | 5           |
| Sorghum Partners NK7829  | <b>6,101</b>                      | -                               | 16.8             | 53.1               | 70                   | 60                | 6                     | 2                    | 3                      | 0            | 5           |
| Sorghum Partners SP6929  | <b>6,052</b>                      | -                               | 17.6             | 54.3               | 68                   | 55                | 9                     | 2                    | 1                      | 0            | 0           |
| Sorghum Partners X445    | <b>6,027</b>                      | -                               | 14.7             | 53.2               | 69                   | 51                | 9                     | 2                    | 1                      | 0            | 0           |
| REV® RV9883™             | <b>5,906</b>                      | 5,770                           | 16.6             | 54.4               | 70                   | 66                | 6                     | 3                    | 1                      | 5            | 5           |
| Sorghum Partners X865    | <b>5,843</b>                      | 5,772                           | 15.2             | 54.6               | 70                   | 59                | 8                     | 1                    | 1                      | 0            | 5           |
| Dyna-Gro M77GB52         | 5,777                             | 5,719                           | 14.0             | 52.4               | 68                   | 59                | 7                     | 4                    | 3                      | 5            | 5           |
| Dyna-Gro M77GR61         | 5,716                             | -                               | 14.2             | 49.5               | 71                   | 58                | 4                     | 2                    | 2                      | 5            | 5           |
| Dyna-Gro M72GW14         | 5,654                             | -                               | 15.2             | 52.3               | 73                   | 55                | 5                     | 2                    | 2                      | 0            | 0           |
| Dyna-Gro 765B            | 5,557                             | 5,596                           | 14.7             | 55.2               | 71                   | 61                | 6                     | 3                    | 3                      | 5            | 5           |
| Sorghum Partners X840    | 5,420                             | 4,983                           | 15.8             | 56.4               | 70                   | 70                | 9                     | 2                    | 2                      | 0            | 15          |
| Sorghum Partners X446    | 5,392                             | -                               | 14.4             | 51.5               | 67                   | 44                | 5                     | 2                    | 2                      | 0            | 5           |
| Sorghum Partners X715    | 5,237                             | -                               | 15.3             | 56.0               | 71                   | 58                | 7                     | 3                    | 1                      | 15           | 0           |
| Sorghum Partners SPX3678 | 5,189                             | -                               | 15.2             | 49.2               | 68                   | 57                | 6                     | 3                    | 1                      | 0            | 0           |
| Pioneer 83P99            | 5,091                             | -                               | 15.4             | 51.9               | 73                   | 57                | 3                     | 2                    | 2                      | 5            | 10          |
| Sorghum Partners NK6638  | 5,030                             | 5,297                           | 15.3             | 44.0               | 70                   | 57                | 5                     | 4                    | 4                      | 20           | 5           |
| Sorghum Partners SPX3675 | 5,022                             | -                               | 15.3             | 45.4               | 68                   | 54                | 6                     | 3                    | 3                      | 5            | 0           |
| Sorghum Partners SPX3550 | 4,945                             | -                               | 13.4             | 44.9               | 65                   | 47                | 6                     | 4                    | 1                      | 0            | 0           |
| Sorghum Partners K73-J6  | 4,858                             | -                               | 16.0             | 51.9               | 69                   | 57                | 7                     | 3                    | 2                      | 5            | 5           |

|                          |              |          |             |             |           |           |           |           |           |            |           |
|--------------------------|--------------|----------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|
| Sorghum Partners SPX3680 | 4,609        | -        | 14.2        | 52.0        | 69        | 56        | 5         | 3         | 2         | 0          | 5         |
| Sorghum Partners NK7633  | 4,508        | -        | 17.0        | 48.1        | 69        | 53        | 8         | 2         | 1         | 5          | 5         |
| <b>Average</b>           | <b>5,726</b> | <b>-</b> | <b>15.4</b> | <b>52.8</b> | <b>69</b> | <b>57</b> | <b>6</b>  | <b>3</b>  | <b>2</b>  | <b>5</b>   | <b>5</b>  |
| <b>CV, %</b>             | <b>12</b>    | <b>-</b> | <b>6</b>    | <b>3</b>    | <b>2</b>  | <b>3</b>  | <b>27</b> | <b>18</b> | <b>64</b> | <b>219</b> | <b>90</b> |
| <b>LSD (0.10)</b>        | <b>814</b>   | <b>-</b> | <b>1.6</b>  | <b>2.3</b>  | <b>2</b>  | <b>3</b>  | <b>3</b>  | <b>1</b>  | <b>1</b>  | <b>10</b>  | <b>5</b>  |

<sup>1</sup>Yields in bold denote hybrids that were in the highest-yielding group in 2014.

<sup>2</sup>Hybrids in bold with an asterisk (\*) were in the highest-yielding group for both years, 2013 and 2014.

<sup>3</sup>Diseases (dis) present were primarily corn northern leaf blight, with little anthracnose present. Ratings were 0-9, with 0 having no symptoms and 9 severe symptoms.

**Table 8. Performance of grain sorghum hybrids with fungicide<sup>1</sup> on Commerce silt loam at St. Joseph, 2014.**

| Brand/hybrid             | Yield | Gr<br>mo | Test<br>wt | Mid-<br>head | Plt<br>ht | Head<br>exert | Head<br>type | Dis | Midge | Bird |
|--------------------------|-------|----------|------------|--------------|-----------|---------------|--------------|-----|-------|------|
|                          | lb/a  | %        | lb/bu      | DAP          | in        | in            | 1-5          |     | %     | %    |
| REV <sup>®</sup> RV9562™ | 7,067 | 15.0     | 54.7       | 67           | 57        | 5             | 3            | -   | 5     | 5    |
| REV <sup>®</sup> RV9924™ | 6,835 | 15.4     | 52.3       | 68           | 64        | 5             | 2            | -   | 5     | 10   |
| REV <sup>®</sup> RV9782™ | 6,828 | 14.9     | 55.0       | 66           | 57        | 4             | 4            | -   | 5     | 5    |
| REV <sup>®</sup> RV9883™ | 6,758 | 15.1     | 54.9       | 69           | 60        | 3             | 4            | -   | 5     | 5    |
| Sorghum Partners SP7868  | 6,698 | 14.7     | 56.2       | 68           | 56        | 9             | 1            | -   | 5     | 0    |
| Pioneer 83P17            | 6,648 | 17.6     | 51.4       | 70           | 61        | 4             | 4            | -   | 5     | 5    |
| DEKALB DKS51-01          | 6,579 | 16.1     | 55.5       | 69           | 68        | 5             | 3            | -   | 5     | 10   |
| Dyna-Gro M75GB39         | 6,563 | 15.4     | 52.7       | 65           | 53        | 8             | 4            | -   | 0     | 5    |
| Sorghum Partners X445    | 6,394 | 14.8     | 52.7       | 67           | 53        | 8             | 2            | -   | 0     | 0    |
| Sorghum Partners NK7829  | 6,287 | 16.0     | 55.0       | 70           | 59        | 6             | 2            | -   | 5     | 5    |
| Dyna-Gro M77GR61         | 6,169 | 14.7     | 48.5       | 70           | 61        | 6             | 2            | -   | 5     | 5    |
| Sorghum Partners SP6929  | 6,165 | 16.2     | 54.2       | 67           | 55        | 8             | 2            | -   | 0     | 0    |
| Pioneer 84P80            | 6,126 | 15.3     | 55.6       | 72           | 61        | 4             | 3            | -   | 0     | 5    |
| Sorghum Partners X840    | 5,952 | 14.7     | 57.2       | 70           | 74        | 9             | 1            | -   | 10    | 5    |
| Dyna-Gro M72GW14         | 5,944 | 14.0     | 53.7       | 72           | 56        | 7             | 2            | -   | 0     | 0    |
| Sorghum Partners X865    | 5,940 | 16.4     | 52.6       | 68           | 61        | 4             | 1            | -   | 5     | 5    |
| Sorghum Partners SPX3678 | 5,902 | 16.1     | 44.4       | 66           | 57        | 7             | 4            | -   | 0     | 0    |
| DEKALB DKS53-67          | 5,824 | 15.3     | 56.2       | 69           | 58        | 7             | 3            | -   | 5     | 5    |
| Dyna-Gro 765B            | 5,665 | 17.1     | 53.5       | 69           | 65        | 7             | 2            | -   | 5     | 10   |
| Dyna-Gro M77GB52         | 5,633 | 14.6     | 50.0       | 68           | 54        | 6             | 4            | -   | 5     | 10   |
| Pioneer 83P99            | 5,621 | 14.3     | 54.2       | 72           | 57        | 2             | 3            | -   | 10    | 10   |
| Sorghum Partners SPX3675 | 5,458 | 14.0     | 44.2       | 67           | 52        | 5             | 3            | -   | 0     | 5    |
| Sorghum Partners NK6638  | 5,391 | 14.2     | 47.2       | 68           | 56        | 4             | 3            | -   | 10    | 0    |
| Sorghum Partners X446    | 5,229 | 14.6     | 52.6       | 66           | 48        | 5             | 2            | -   | 0     | 0    |
| Sorghum Partners K73-J6  | 5,108 | 14.7     | 51.2       | 68           | 57        | 8             | 3            | -   | 0     | 5    |
| Sorghum Partners SPX3680 | 4,736 | 15.7     | 50.6       | 67           | 56        | 4             | 3            | -   | 0     | 5    |
| Sorghum Partners NK7633  | 4,717 | 15.2     | 52.2       | 67           | 54        | 7             | 2            | -   | 0     | 5    |

|                          |              |             |             |           |           |           |           |          |            |                       |
|--------------------------|--------------|-------------|-------------|-----------|-----------|-----------|-----------|----------|------------|-----------------------|
| Sorghum Partners X715    | 4,662        | 15.7        | 55.3        | 72        | 56        | 7         | 2         | -        | 10         | 15                    |
| Sorghum Partners SPX3550 | 4,325        | 14.4        | 40.7        | 64        | 54        | 9         | 4         | -        | 0          | 0                     |
| <b>Average</b>           | <b>5,904</b> | <b>15.2</b> | <b>52.3</b> | <b>68</b> | <b>58</b> | <b>6</b>  | <b>3</b>  | <b>-</b> | <b>5</b>   | <b>5</b>              |
| <b>CV, %</b>             | <b>8</b>     | <b>6</b>    | <b>3</b>    | <b>2</b>  | <b>4</b>  | <b>26</b> | <b>18</b> | <b>-</b> | <b>131</b> | <b>142</b>            |
| <b>LSD (0.10)</b>        | <b>561</b>   | <b>1.4</b>  | <b>2.6</b>  | <b>2</b>  | <b>4</b>  | <b>3</b>  | <b>1</b>  | <b>-</b> | <b>5</b>   | <b>NS<sup>2</sup></b> |

<sup>1</sup>The fungicide Quilt was applied (June 20) at 14 oz/acre across the entire trial.

<sup>2</sup>NS=Non-significant at the 0.10 probability level.

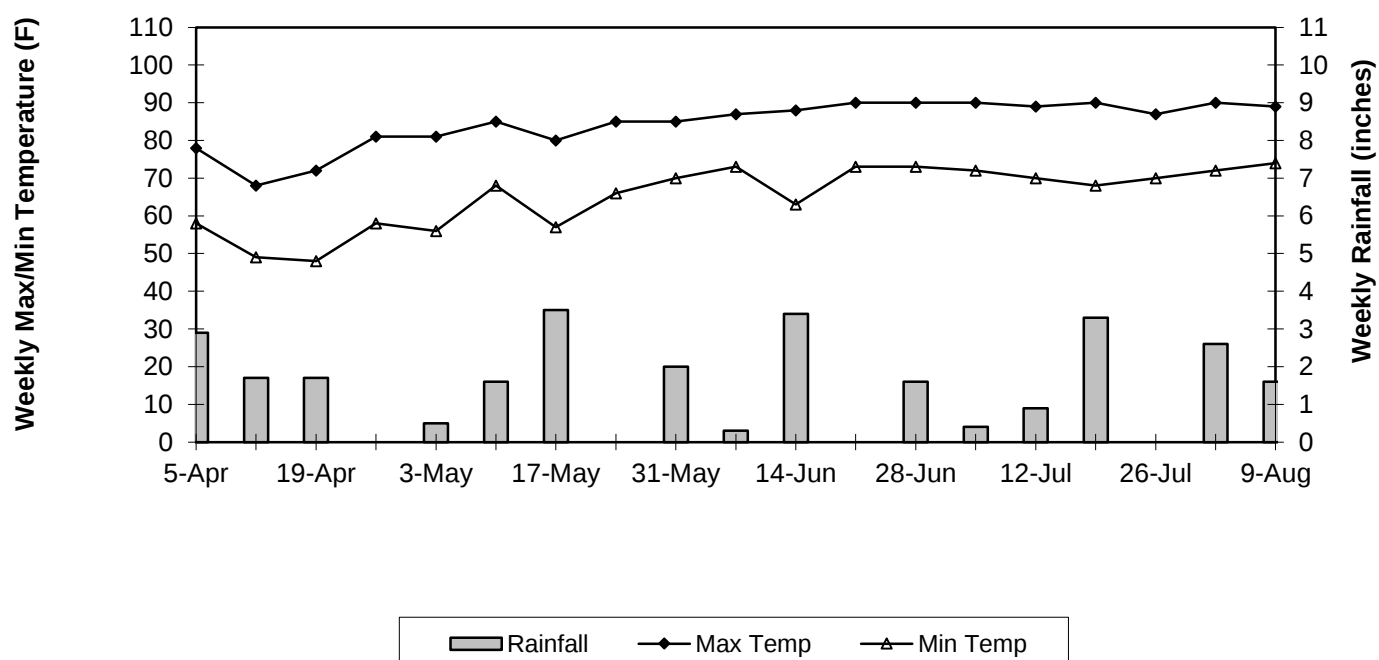
# Grain Sorghum Hybrid Performance Trial on Sharkey silty clay at the Northeast Research Station – St. Joseph

## Location Summary

Rainfall was well distributed and temperatures remained below 90. The trial was duplicated, one with no fungicide (Table 9) and one with fungicide (Table 10). Grain yields ranged from 3,715 to 6,051 lb/acre, with a trial average of 5,254 lb/acre for the no-fungicide trial and yields ranged from 4,051 to 6,516 lb/acre, with a trial average of 5,305 lb/acre in fungicide trial. There was little disease pressure. There were eleven hybrids that fell into the 2014 high-yielding group (Table 9) and one hybrid (Dekalb DKS51-01) that fell in the high- yielding group both years, 2013 and 2014. White sugarcane aphid (WSA) pressure was high, requiring two applications of Transform. Insect ratings suggested that there may be a difference in tolerance to WSA among hybrids.

|               |                                                                                                                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil type     | Sharkey silty clay                                                                                                                                                                                                                                                                |
| Row spacing   | 40-inches                                                                                                                                                                                                                                                                         |
| Seeding rate  | 7 seed/ft                                                                                                                                                                                                                                                                         |
| Previous crop | Grain sorghum                                                                                                                                                                                                                                                                     |
| Planting date | April 23                                                                                                                                                                                                                                                                          |
| Fertilization | <i>Sidedress</i> : 150 lb N/acre – 30-0-0-2 (5/5);                                                                                                                                                                                                                                |
| Pesticides    | <i>Burndown</i> : 1.4 pt Roundup/acre plus 1.5 pt 2,4-D/acre (2/25);<br><i>Postemergence</i> : 3 qt Lexar/acre (4/27); 2 qt Atrazine plus 1.5 pt Parallel/acre;<br><i>Insecticides</i> : 2.5 oz Baythroid/acre plus 1 oz Transform/acre (6/25, 7/8); 2.5 oz Baythroid/acre (7/1); |
| Harvest date  | August 18-19                                                                                                                                                                                                                                                                      |

## St. Joseph Weekly Weather



**Table 9. Performance of grain sorghum hybrids with no fungicide on Sharkey silty clay at St. Joseph, 2014.**

| <b>Brand/hybrid</b>      | <b>2014<br/>Yield<sup>1</sup></b> | <b>2-yr<br/>avg<sup>2</sup></b> | <b>Gr<br/>mo</b> | <b>Test<br/>wt</b> | <b>Mid-<br/>head</b> | <b>Plt<br/>ht</b> | <b>Head<br/>exert</b> | <b>Head<br/>type</b> | <b>Insect<sup>3</sup></b> | <b>Bird</b> |
|--------------------------|-----------------------------------|---------------------------------|------------------|--------------------|----------------------|-------------------|-----------------------|----------------------|---------------------------|-------------|
|                          | lb/a                              | lb/a                            | %                | lb/bu              | DAP                  | in                | in                    | 1-5                  | 1-3                       | %           |
| REV® RV9782™             | <b>6,051</b>                      | 6,548                           | 13.3             | 52.6               | 62                   | 58                | 6                     | 4                    | 3                         | 5           |
| REV® RV9562™             | <b>6,047</b>                      | 6,455                           | 14.0             | 54.3               | 62                   | 60                | 8                     | 3                    | 2                         | 10          |
| Pioneer 83P17            | <b>6,012</b>                      | 6,596                           | 15.5             | 51.7               | 66                   | 60                | 6                     | 3                    | 1                         | 10          |
| <b>DEKALB DKS51-01*</b>  | <b>5,840</b>                      | 6,549                           | 13.8             | 55.4               | 62                   | 62                | 6                     | 3                    | 2                         | 10          |
| REV® RV9924™             | <b>5,764</b>                      | 6,350                           | 13.2             | 53.1               | 64                   | 62                | 6                     | 3                    | 2                         | 15          |
| REV® RV9883™             | <b>5,716</b>                      | 6,150                           | 14.5             | 54.9               | 61                   | 61                | 8                     | 4                    | 1                         | 5           |
| Sorghum Partners X445    | <b>5,645</b>                      | -                               | 14.3             | 51.3               | 64                   | 54                | 8                     | 2                    | 2                         | 5           |
| Dyna-Gro M77GR61         | <b>5,610</b>                      | -                               | 13.8             | 48.3               | 65                   | 62                | 6                     | 2                    | 2                         | 10          |
| Sorghum Partners X715    | <b>5,571</b>                      | -                               | 14.4             | 54.1               | 66                   | 59                | 9                     | 2                    | 2                         | 10          |
| Sorghum Partners SPX3678 | <b>5,551</b>                      | -                               | 12.3             | 48.7               | 62                   | 57                | 8                     | 3                    | 3                         | 0           |
| Dyna-Gro 765B            | <b>5,506</b>                      | 6,327                           | 13.2             | 53.2               | 65                   | 63                | 6                     | 3                    | 3                         | 5           |
| Sorghum Partners SPX3550 | 5,457                             | -                               | 12.7             | 52.4               | 59                   | 50                | 5                     | 3                    | 3                         | 0           |
| Pioneer 84P80            | 5,426                             | 6,296                           | 13.4             | 55.8               | 66                   | 55                | 4                     | 2                    | 2                         | 10          |
| Sorghum Partners NK6638  | 5,391                             | 5,931                           | 12.5             | 49.7               | 63                   | 56                | 7                     | 4                    | 2                         | 10          |
| Dyna-Gro M77GB52         | 5,362                             | 5,791                           | 12.7             | 51.6               | 62                   | 58                | 8                     | 4                    | 2                         | 5           |
| DEKALB DKS53-67          | 5,324                             | 6,086                           | 14.1             | 56.3               | 63                   | 50                | 3                     | 2                    | 3                         | 5           |
| Sorghum Partners X840    | 5,272                             | 5,565                           | 14.1             | 54.6               | 66                   | 69                | 11                    | 1                    | 1                         | 5           |
| Sorghum Partners SPX3675 | 5,265                             | -                               | 12.3             | 48.6               | 63                   | 54                | 5                     | 3                    | 3                         | 5           |
| Dyna-Gro M75GB39         | 5,256                             | 5,983                           | 15.3             | 53.6               | 61                   | 55                | 8                     | 3                    | 3                         | 5           |
| Sorghum Partners SP7868  | 5,203                             | 5,915                           | 14.1             | 54.9               | 66                   | 59                | 9                     | 2                    | 2                         | 5           |
| Sorghum Partners SP6929  | 5,115                             | -                               | 13.5             | 55.5               | 64                   | 56                | 10                    | 2                    | 3                         | 5           |
| Sorghum Partners X865    | 5,009                             | 5,594                           | 14.4             | 54.9               | 67                   | 63                | 6                     | 2                    | 1                         | 10          |
| Pioneer 83P99            | 4,955                             | -                               | 13.6             | 52.7               | 65                   | 56                | 6                     | 2                    | 2                         | 5           |
| Sorghum Partners NK7829  | 4,689                             | -                               | 16.2             | 55.1               | 67                   | 55                | 7                     | 2                    | 2                         | 5           |
| Sorghum Partners K73-J6  | 4,629                             | -                               | 13.5             | 52.3               | 62                   | 63                | 8                     | 3                    | 2                         | 15          |
| Dyna-Gro M72GW14         | 4,339                             | -                               | 13.4             | 52.6               | 66                   | 53                | 5                     | 1                    | 1                         | 0           |
| Sorghum Partners X446    | 4,326                             | -                               | 12.9             | 52.2               | 62                   | 48                | 5                     | 3                    | 2                         | 0           |

|                          |              |          |             |             |           |           |           |           |           |           |
|--------------------------|--------------|----------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sorghum Partners SPX3680 | 4,313        | -        | 12.6        | 46.7        | 64        | 58        | 6         | 3         | 2         | 10        |
| Sorghum Partners NK7633  | 3,715        | -        | 14.3        | 48.8        | 63        | 55        | 8         | 1         | 3         | 0         |
| <b>Average</b>           | <b>5,254</b> | <b>-</b> | <b>13.7</b> | <b>52.5</b> | <b>64</b> | <b>58</b> | <b>7</b>  | <b>2</b>  | <b>2</b>  | <b>5</b>  |
| <b>CV, %</b>             | <b>9</b>     | <b>-</b> | <b>6</b>    | <b>4</b>    | <b>2</b>  | <b>4</b>  | <b>20</b> | <b>23</b> | <b>34</b> | <b>87</b> |
| <b>LSD (0.10)</b>        | <b>560</b>   | <b>-</b> | <b>1.4</b>  | <b>3.2</b>  | <b>2</b>  | <b>4</b>  | <b>2</b>  | <b>1</b>  | <b>1</b>  | <b>5</b>  |

<sup>1</sup>Yields in bold denote hybrids that were in the highest-yielding group in 2014.

<sup>2</sup>Hybrids in bold with an asterisk (\*) were in the highest-yielding group for both years, 2013 and 2014.

<sup>3</sup>White sugarcane aphid ratings. Ratings 1-3, with 1=0-500 aphids/leaf, 2=500-1,000 aphids/leaf, and 3=1000+ aphids/leaf.

**Table 10. Performance of grain sorghum hybrids with fungicide<sup>1</sup> on Sharkey silty clay at St. Joseph, 2014.**

| Brand/hybrid             | 2014<br>Yield <sup>1</sup> | Gr<br>mo | Test<br>wt | Mid-<br>head | Plt<br>ht | Head<br>exert | Head<br>type | Insect | Bird |
|--------------------------|----------------------------|----------|------------|--------------|-----------|---------------|--------------|--------|------|
|                          | lb/a                       | %        | lb/bu      | DAP          | in        | in            | 1-5          | 1-3    | %    |
| REV <sup>®</sup> RV9562™ | 6,516                      | 15.0     | 54.8       | 63           | 60        | 9             | 4            | 2      | 10   |
| REV <sup>®</sup> RV9924™ | 6,344                      | 15.8     | 53.1       | 64           | 62        | 5             | 3            | 2      | 10   |
| REV <sup>®</sup> RV9883™ | 6,155                      | 18.6     | 54.1       | 63           | 60        | 7             | 3            | 2      | 5    |
| Dyna-Gro 765B            | 5,790                      | 16.3     | 53.4       | 66           | 63        | 5             | 2            | 2      | 10   |
| Sorghum Partners SPX3678 | 5,772                      | 14.2     | 48.7       | 63           | 57        | 5             | 4            | 2      | 5    |
| DEKALB DKS51-01          | 5,770                      | 15.7     | 55.0       | 64           | 60        | 7             | 3            | 2      | 15   |
| Sorghum Partners SP7868  | 5,716                      | 18.0     | 54.5       | 66           | 58        | 9             | 2            | 2      | 5    |
| REV <sup>®</sup> RV9782™ | 5,682                      | 15.6     | 47.2       | 63           | 57        | 5             | 3            | 1      | 10   |
| DEKALB DKS53-67          | 5,614                      | 16.1     | 56.4       | 64           | 56        | 3             | 2            | 2      | 5    |
| Sorghum Partners X715    | 5,466                      | 16.8     | 56.3       | 66           | 61        | 8             | 2            | 2      | 5    |
| Dyna-Gro M77GB52         | 5,426                      | 16.3     | 46.9       | 64           | 61        | 7             | 4            | 3      | 10   |
| Dyna-Gro M75GB39         | 5,352                      | 15.3     | 54.2       | 60           | 54        | 6             | 3            | 2      | 10   |
| Pioneer 83P99            | 5,347                      | 18.1     | 56.6       | 65           | 57        | 4             | 2            | 2      | 10   |
| Pioneer 84P80            | 5,326                      | 16.0     | 54.8       | 66           | 56        | 3             | 3            | 2      | 5    |
| Pioneer 83P17            | 5,296                      | 17.9     | 53.3       | 66           | 61        | 8             | 3            | 2      | 10   |
| Sorghum Partners SPX3675 | 5,254                      | 17.1     | 43.3       | 64           | 52        | 5             | 3            | 3      | 10   |
| Sorghum Partners SP6929  | 5,233                      | 15.6     | 51.8       | 63           | 54        | 10            | 2            | 2      | 5    |
| Sorghum Partners NK6638  | 5,190                      | 15.7     | 52.5       | 66           | 59        | 8             | 4            | 2      | 5    |
| Sorghum Partners SPX3550 | 5,144                      | 14.3     | 50.9       | 60           | 51        | 6             | 3            | 3      | 0    |
| Sorghum Partners X865    | 5,074                      | 17.6     | 52.7       | 66           | 61        | 4             | 1            | 1      | 10   |
| Dyna-Gro M77GR61         | 5,040                      | 15.7     | 47.8       | 65           | 60        | 6             | 2            | 2      | 10   |
| Sorghum Partners X840    | 5,040                      | 16.9     | 55.4       | 66           | 69        | 11            | 1            | 2      | 5    |
| Sorghum Partners X445    | 5,008                      | 15.7     | 53.5       | 66           | 51        | 7             | 2            | 2      | 5    |
| Sorghum Partners NK7829  | 5,001                      | 18.3     | 52.7       | 64           | 57        | 7             | 1            | 2      | 10   |
| Dyna-Gro M72GW14         | 4,918                      | 16.9     | 52.9       | 67           | 57        | 7             | 1            | 1      | 0    |
| Sorghum Partners SPX3680 | 4,619                      | 16.0     | 50.9       | 64           | 55        | 3             | 2            | 2      | 10   |

|                         |              |                       |             |           |           |           |           |           |           |
|-------------------------|--------------|-----------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sorghum Partners K73-J6 | 4,557        | 15.2                  | 50.4        | 65        | 59        | 9         | 3         | 2         | 10        |
| Sorghum Partners NK7633 | 4,142        | 17.0                  | 49.5        | 64        | 54        | 8         | 3         | 2         | 0         |
| Sorghum Partners X446   | 4,051        | 17.9                  | 55.7        | 64        | 48        | 5         | 3         | 2         | 5         |
| <b>Average</b>          | <b>5,305</b> | <b>16.4</b>           | <b>52.4</b> | <b>64</b> | <b>58</b> | <b>6</b>  | <b>2</b>  | <b>2</b>  | <b>5</b>  |
| <b>CV, %</b>            | <b>10</b>    | <b>8</b>              | <b>4</b>    | <b>3</b>  | <b>4</b>  | <b>25</b> | <b>24</b> | <b>37</b> | <b>83</b> |
| <b>LSD (0.10)</b>       | <b>611</b>   | <b>NS<sup>2</sup></b> | <b>3.9</b>  | <b>2</b>  | <b>4</b>  | <b>3</b>  | <b>1</b>  | <b>NS</b> | <b>5</b>  |

<sup>1</sup>The fungicide Quilt was applied (June 25) at 14 oz/acre across the entire trial.

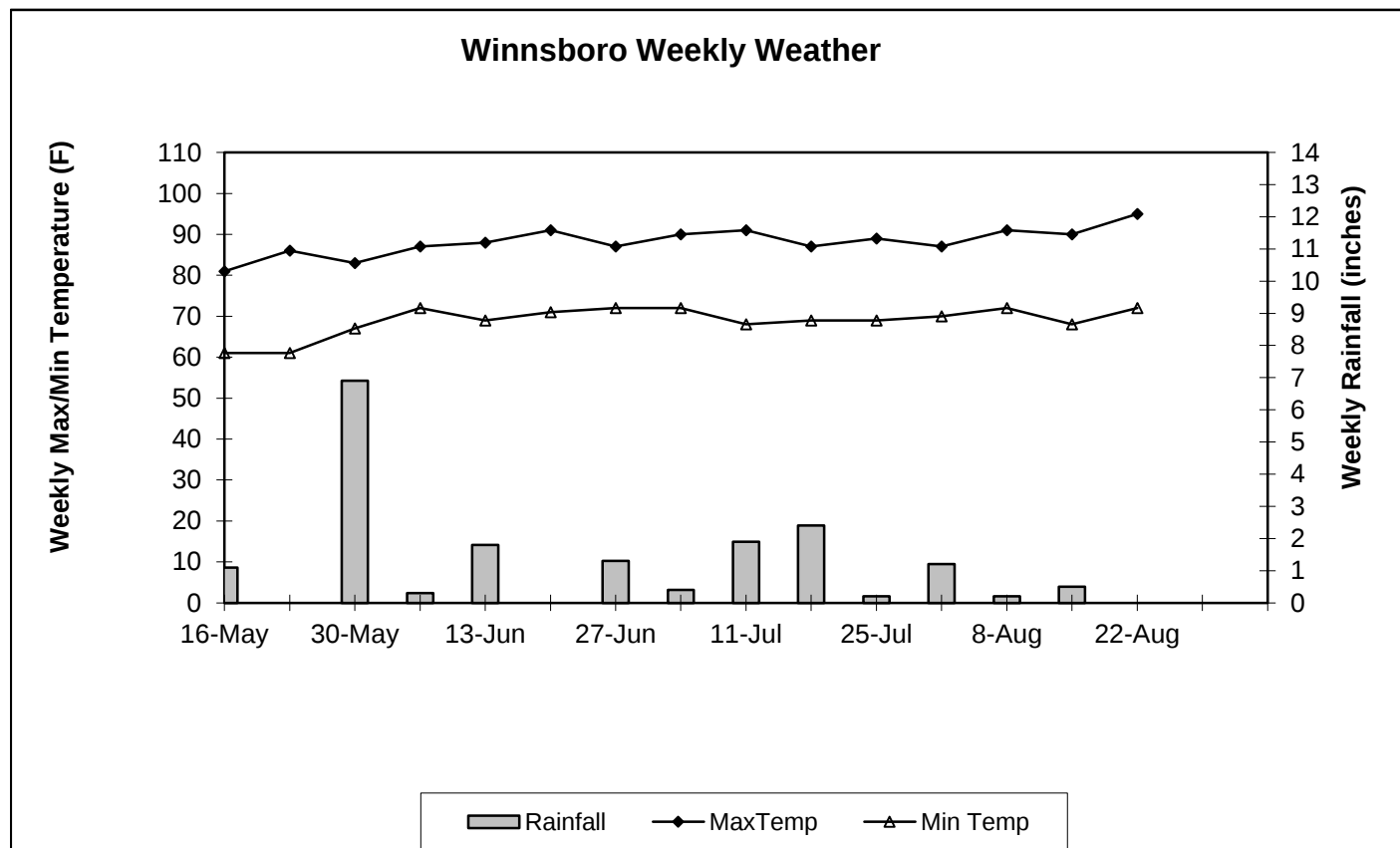
<sup>2</sup>NS=Non-significant at the 0.10 probability level.

## Grain Sorghum Hybrid Performance Trial at the Macon Ridge Research Station – Winnsboro

### Location Summary

Rainfall was relatively low, but well distributed. Grain yields were low ranging from 1,401 to 4,659 lb/acre, with a trial average of 3,380 lb/acre (Table 11). There were twelve hybrids that fell in the 2014 highest-yielding group and five hybrids that were in the highest-yielding group for both years, 2013 and 2014. As a result of the relatively dry conditions, head exertion was low, averaging only 4 inches. Insecticide applications were made for white sugarcane aphid, midge, and headworm.

|               |                                                                                                                                                                                                                                             |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soil type     | Gigger silt loam                                                                                                                                                                                                                            |
| Row spacing   | 40-inches                                                                                                                                                                                                                                   |
| Seeding rate  | 7 seed/ft                                                                                                                                                                                                                                   |
| Previous crop | Soybeans                                                                                                                                                                                                                                    |
| Planting date | May 6                                                                                                                                                                                                                                       |
| Fertilization | <i>Sidedress</i> : 100 lb N/acre – 30-0-0-2                                                                                                                                                                                                 |
| Pesticides    | <i>Preemerg</i> : 1 qt Atrazine/acre plus 1 pt Dual/acre;<br><i>Postemerg</i> : 1 qt Atrazine/acre plus 1 pt Gramoxone/acre;<br><i>Insecticides</i> : 1.5 oz Baythroid/acre (7/3); 1.5 oz Transform/acre (7/3, 7/17); 3 oz Belt/acre (8/4); |
| Harvest date  | September 10                                                                                                                                                                                                                                |



**Table 11. Performance of grain sorghum hybrids at Winnsboro, 2014.**

| <b>Brand/hybrid</b>              | <b>2014<br/>Yield<sup>1</sup></b> | <b>2-yr<br/>avg</b> | <b>Gr<br/>mo</b> | <b>Mid-<br/>Head</b> | <b>Plt<br/>ht</b> | <b>Head<br/>exert</b> | <b>Midge</b> |
|----------------------------------|-----------------------------------|---------------------|------------------|----------------------|-------------------|-----------------------|--------------|
|                                  | lb/a                              | lb/a                | %                | DAP                  | in                | in                    | %            |
| <b>REV® RV9782™ *</b>            | <b>4,659</b>                      | 5,238               | 15.8             | 61                   | 53                | 3                     | 5            |
| <b>Sorghum Partners NK6638 *</b> | <b>4,628</b>                      | 5,093               | 15.9             | 62                   | 52                | 3                     | 0            |
| REV® RV9883™                     | <b>4,465</b>                      | 4,908               | 15.3             | 64                   | 54                | 6                     | 0            |
| Dyna-Gro M75GB39                 | <b>4,241</b>                      | 4,556               | 14.1             | 61                   | 52                | 5                     | 5            |
| <b>DEKALB DKS53-67 *</b>         | <b>4,214</b>                      | 5,288               | 14.4             | 62                   | 55                | 3                     | 0            |
| Sorghum Partners SPX3678         | <b>4,051</b>                      | -                   | 13.8             | 62                   | 52                | 4                     | 0            |
| <b>DEKALB DKS51-01*</b>          | <b>4,022</b>                      | 4,963               | 16.5             | 64                   | 60                | 4                     | 5            |
| REV® RV9562™                     | <b>3,974</b>                      | 4,424               | 15.1             | 63                   | 54                | 5                     | 5            |
| REV® RV9924™                     | <b>3,965</b>                      | 4,624               | 15.1             | 62                   | 61                | 4                     | 0            |
| Sorghum Partners SPX3550         | <b>3,958</b>                      | -                   | 15.6             | 59                   | 45                | 3                     | 0            |
| Sorghum Partners SPX3680         | <b>3,727</b>                      | -                   | 14.5             | 61                   | 49                | 2                     | 0            |
| <b>Dyna-Gro M77GB52 *</b>        | <b>3,661</b>                      | 4,569               | 15.4             | 62                   | 52                | 4                     | 0            |
| Pioneer 83P99                    | 3,512                             | -                   | 16.5             | 67                   | 45                | 3                     | 5            |
| Sorghum Partners X840            | 3,467                             | 4,325               | 17.1             | 66                   | 66                | 7                     | 10           |
| Sorghum Partners K73-J6          | 3,384                             | -                   | 15.3             | 64                   | 50                | 4                     | 10           |
| Sorghum Partners SP7868          | 3,273                             | 4,305               | 16.5             | 64                   | 55                | 6                     | 5            |
| Sorghum Partners NK7633          | 3,121                             | -                   | 13.9             | 62                   | 49                | 7                     | 0            |
| Sorghum Partners X865            | 3,078                             | 3,914               | 16.1             | 62                   | 58                | 4                     | 5            |
| Pioneer 83P17                    | 3,067                             | 4,211               | 17.0             | 69                   | 54                | 1                     | 0            |
| Sorghum Partners X715            | 2,978                             | -                   | 15.9             | 65                   | 55                | 4                     | 5            |
| Sorghum Partners SPX3675         | 2,843                             | -                   | 14.6             | 61                   | 49                | 2                     | 5            |
| Pioneer 84P80                    | 2,802                             | 4,440               | 15.8             | 64                   | 53                | 2                     | 10           |
| Dyna-Gro M77GR61                 | 2,623                             | -                   | 16.7             | 66                   | 53                | 4                     | 0            |
| Dyna-Gro 765B                    | 2,562                             | 4,134               | 16.2             | 68                   | 58                | 4                     | 10           |
| Sorghum Partners SP6929          | 2,510                             | -                   | 14.9             | 64                   | 53                | 7                     | 10           |
| Sorghum Partners X446            | 2,387                             | -                   | 15.9             | 62                   | 46                | 3                     | 5            |

| <b>Brand/hybrid</b>     | <b>2014<br/>Yield<sup>1</sup></b> | <b>2-yr<br/>avg</b> | <b>Gr<br/>mo</b> | <b>Mid-<br/>Head</b> | <b>Plt<br/>ht</b> | <b>Head<br/>exert</b> | <b>Midge</b> |
|-------------------------|-----------------------------------|---------------------|------------------|----------------------|-------------------|-----------------------|--------------|
|                         | lb/a                              | lb/a                | %                | DAP                  | in                | in                    | %            |
| Dyna-Gro M72GW14        | 2,027                             | -                   | 15.2             | 67                   | 54                | 6                     | 10           |
| Sorghum Partners X445   | 1,653                             | -                   | 14.8             | 66                   | 52                | 6                     | 15           |
| Sorghum Partners NK7829 | 1,401                             | -                   | 15.6             | 68                   | 58                | 8                     | 25           |
| <b>Average</b>          | <b>3,380</b>                      | <b>-</b>            | <b>15.5</b>      | <b>64</b>            | <b>53</b>         | <b>4</b>              | <b>5</b>     |
| <b>CV, %</b>            | <b>28</b>                         | <b>-</b>            | <b>6</b>         | <b>2</b>             | <b>5</b>          | <b>33</b>             | <b>192</b>   |
| <b>LSD (0.10)</b>       | <b>1,002</b>                      | <b>-</b>            | <b>1.6</b>       | <b>2</b>             | <b>4</b>          | <b>2</b>              | <b>10</b>    |

<sup>1</sup>Yields in bold denote hybrids that were in the highest-yielding group in 2014.

<sup>2</sup>Hybrids in bold with an asterisk (\*) were in the highest-yielding group for both years, 2013 and 2014.

**Table 12. Summary of yield performance of grain sorghum hybrids at seven locations in the 2014 LAES official variety trials.**

| Brand/Hybrid             | Alex  | BR    | BC    | CR    | St. Joseph |         | WN    | Avg   |
|--------------------------|-------|-------|-------|-------|------------|---------|-------|-------|
|                          |       |       |       |       | Com sil    | Shar cl |       |       |
|                          |       |       |       |       | lb/acre    |         |       |       |
| DEKALB DKS51-01          | 4,932 | 2,778 | 6,045 | 5,892 | 6,271      | 5,840   | 4,022 | 5,111 |
| DEKALB DKS53-67          | 7,275 | 3,239 | 5,773 | 5,363 | 6,204      | 5,324   | 4,214 | 5,342 |
| Dyna-Gro M72GW14         | 5,956 | 2,110 | 4,904 | 4,142 | 5,654      | 4,339   | 2,027 | 4,162 |
| Dyna-Gro M75GB39         | 6,333 | 2,793 | 5,357 | 3,118 | 6,495      | 5,256   | 4,241 | 4,799 |
| Dyna-Gro M77GB52         | 5,830 | 3,192 | 4,304 | 5,350 | 5,777      | 5,362   | 3,661 | 4,782 |
| Dyna-Gro M77GR61         | 5,800 | 2,880 | 4,749 | 4,756 | 5,716      | 5,610   | 2,623 | 4,591 |
| Dyna-Gro 765B            | 6,209 | 2,798 | 5,431 | 5,936 | 5,557      | 5,506   | 2,562 | 4,857 |
| Sorghum Partners NK6638  | 5,582 | 3,249 | 4,452 | 5,526 | 5,030      | 5,391   | 4,628 | 4,837 |
| Sorghum Partners SP7868  | 6,137 | 3,774 | 4,779 | 5,657 | 6,297      | 5,203   | 3,273 | 5,017 |
| Sorghum Partners SP6929  | 7,146 | 2,681 | 5,282 | 4,630 | 6,052      | 5,115   | 2,510 | 4,774 |
| Sorghum Partners NK7829  | 6,352 | 2,930 | 5,721 | 5,024 | 6,101      | 4,689   | 1,401 | 4,603 |
| Sorghum Partners X865    | 5,810 | 3,415 | 5,944 | 5,449 | 5,843      | 5,009   | 3,078 | 4,935 |
| Sorghum Partners K73-J6  | 6,230 | 2,759 | 5,240 | 5,099 | 4,858      | 4,629   | 3,384 | 4,600 |
| Sorghum Partners NK7633  | 6,405 | 2,935 | 6,386 | 5,076 | 4,508      | 3,715   | 3,121 | 4,592 |
| Sorghum Partners X445    | 6,521 | 2,884 | 5,071 | 4,270 | 6,027      | 5,645   | 1,653 | 4,582 |
| Sorghum Partners X446    | 5,213 | 2,418 | 4,170 | 2,998 | 5,392      | 4,326   | 2,387 | 3,843 |
| REV® RV9924™             | 6,432 | 2,710 | 5,803 | 4,746 | 6,612      | 5,764   | 3,965 | 5,147 |
| REV® RV9782™             | 6,976 | 3,557 | 5,201 | 5,197 | 6,487      | 6,051   | 4,659 | 5,447 |
| REV® RV9562™             | 6,930 | 3,039 | 5,473 | 4,463 | 6,561      | 6,047   | 3,974 | 5,212 |
| REV® RV9883™             | 5,540 | 2,872 | 5,280 | 4,581 | 5,906      | 5,716   | 4,465 | 4,909 |
| Pioneer 83P17            | 6,738 | 3,266 | 6,241 | 5,979 | 6,553      | 6,012   | 3,067 | 5,408 |
| Pioneer 84P80            | 5,974 | 3,182 | 5,267 | 4,853 | 6,220      | 5,426   | 2,802 | 4,818 |
| Pioneer 83P99            | 6,367 | 3,308 | 5,758 | 5,003 | 5,091      | 4,955   | 3,512 | 4,856 |
| Sorghum Partners SPX3680 | 5,984 | 2,842 | 5,773 | 3,720 | 4,609      | 4,313   | 3,727 | 4,424 |
| Sorghum Partners SPX3678 | 6,470 | 2,732 | 4,808 | 3,372 | 5,189      | 5,551   | 4,051 | 4,596 |
| Sorghum Partners SPX3675 | 6,572 | 3,078 | 4,691 | 3,517 | 5,022      | 5,265   | 2,843 | 4,427 |

| Brand/Hybrid             | Alex         | BR           | BC           | CR           | St. Joseph   |              | WN           | Avg   |
|--------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
|                          |              |              |              |              | Com sil      | Shar cl      |              |       |
|                          |              |              |              |              | lb/acre      |              |              |       |
| Sorghum Partners SPX3550 | 6,418        | 3,482        | 3,987        | 3,552        | 4,945        | 5,457        | 3,958        | 4,543 |
| Sorghum Partners X840    | 6,174        | 2,557        | 4,080        | 5,521        | 5,420        | 5,272        | 3,467        | 4,642 |
| Sorghum Partners X715    | 5,689        | 3,597        | 4,629        | 5,567        | 5,237        | 5,571        | 2,978        | 4,753 |
| <b>Average</b>           | <b>6,207</b> | <b>3,002</b> | <b>5,194</b> | <b>4,771</b> | <b>5,726</b> | <b>5,254</b> | <b>3,380</b> |       |

**Table 13. List of participating seed companies and hybrids tested in the LAES 2014 grain sorghum official variety trials.**

| <b>Company</b>                                                            | <b>Brand/Hybrid</b>                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chromatin, Inc<br>403 South Monroe<br>New Deal, TX 79350                  | Sorghum Partners K73-J6, Sorghum Partners NK6638,<br>Sorghum Partners NK7633, Sorghum Partners NK7829,<br>Sorghum Partners SP6929, Sorghum Partners SP7868,<br>Sorghum Partners SPX3550, Sorghum Partners SPX3675<br>Sorghum Partners SPX3678, Sorghum Partners SPX3680<br>Sorghum Partners X445, Sorghum Partners X446,<br>Sorghum Partners X715, Sorghum Partners X840,<br>Sorghum Partners X865 |
| Crop Production Services/Dyna-Gro Seed<br>11 Gin Rd<br>Rayville, LA 71269 | Dyna-Gro M72GW14, Dyna-Gro M75GB39,<br>Dyna-Gro M77GB52, Dyna-Gro M77GR61,<br>Dyna-Gro 765B                                                                                                                                                                                                                                                                                                        |
| Dupont/Pioneer<br>59 Greif Parkway, Suite 200<br>Delaware, OH 43015       | Pioneer 83P17, Pioneer 83P99, Pioneer 84P80                                                                                                                                                                                                                                                                                                                                                        |
| Monsanto/Dekalb<br>982 US Hwy 77<br>Bishop, TX 98343                      | DEKALB DKS51-01, DEKALB DKS53-67                                                                                                                                                                                                                                                                                                                                                                   |
| Terral Seed, Inc.<br>111 Ellington Dr.<br>Rayville, LA 71269              | REV®RV9562™, REV®RV9782™, REV®RV9883™,<br>REV®RV9924™                                                                                                                                                                                                                                                                                                                                              |